



# Achieving Sustainable Growth through Innovation

Showa Denko K.K. Annual Report 2014

# Our Vision

**We at the Showa Denko Group will provide products and services that are useful and safe and exceed our customers' expectations, thereby enhancing the value of the Group, giving satisfaction to our shareholders, and contributing to the sound growth of international society as a responsible corporate citizen.**

## Profile

Ranking as one of Japan's leading chemical companies, Showa Denko K.K. operates in the six major segments of petrochemicals, chemicals, electronics, inorganics, aluminum, and others.

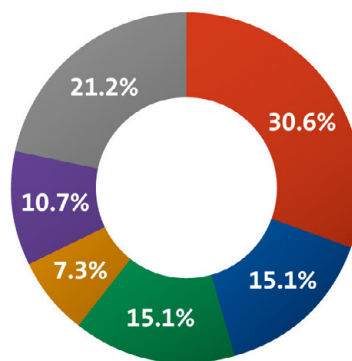
During 2014, the Japanese economy had been in stagnant mood because of the reactive fall in aggregate demand after the last-minute demand increase before the consumption tax hike. In the second half of the year, crude-oil prices plunged, resulting in a large drop in prices of petrochemicals. Thus, our business environment remained harsh.

Under these circumstances, the Showa Denko Group launched in January 2014 "PEGASUS Phase II" business plan, the latter part of the consolidated business plan "PEGASUS" (2011–2015). In line with the business strategies of "PEGASUS Phase II," we have steadily taken various measures to strengthen our businesses. For example, in the most important business category of "Base (Growth)," we started commercial production of the largest capacity HD media in the world, and we promoted capacity expansion project at the plant of our US subsidiary in the graphite electrode business. In the business category of "Growth," we expanded our semiconductor-processing high-purity gas business in East Asia, and acquired an aluminum can manufacturing company in Vietnam, speeding up deployment of these businesses in the rising Asian market.

To establish ourselves as a chemical company with a strong presence on the global market, we will continue to promote growth strategies in which our HD media and graphite electrode businesses serve as our "Wings." At the same time, we will strengthen the four businesses classified in the "Growth" category, namely aluminum cans, high-purity aluminum foils, semiconductor-processing high-purity gases, and functional chemicals, accelerating their expansions mainly in the growing the Asian market.

Showa Denko aims to earn the full trust and confidence of the market and society, always managing operations based on the principles of corporate social responsibility. The Company is also committed to the principles of Responsible Care and is vigorously carrying out an action plan to protect the environment as well as health and safety.

## Showa Denko at a Glance



Net sales 2014

**¥876.6 billion**

*Note: The ratios of respective segments have been calculated after adding the amount of adjustments to net sales.*



### Petrochemicals

Olefins (ethylene and propylene) and organic chemicals (vinyl acetate monomer, ethyl acetate, and allyl alcohol) (See page 17)



### Chemicals

Functional chemicals (polymer emulsion, unsaturated polyester resin and industrial phenolic resin), industrial gases (liquefied carbon dioxide, dry ice, oxygen, nitrogen, and hydrogen), basic chemicals (liquefied ammonia, acrylonitrile, and chloroprene rubber), and electronic chemicals (specialty gases) (See page 18)



### Electronics

Hard disks (HDs), compound semiconductors (LED chips), and rare earth magnetic alloys (See page 18)



### Inorganics

Graphite electrodes and ceramics (alumina and abrasives) (See page 19)



### Aluminum

Rolled products (high-purity foils for capacitors), specialty components (cylinders for laser beam printers [LBPs], forged products, and heat exchangers), and beverage cans (See page 20)



### Others

Lithium-ion battery (LIB) materials, building products, and general trading (See page 21)

### Forward-Looking Statements:

This annual report contains statements relating to management's projections of future profits, the possible achievement of the Company's financial goals and objectives, and management's expectations for the Company's product development program. The Company cannot guarantee that these expectations and projections will be realized or correct. Actual results may differ materially from the results anticipated in the statements included herein due to a variety of factors, including, but not limited to, the economic conditions, costs of naphtha and other raw materials, demand for our products, market conditions, and foreign exchange rates. The timely commercialization of products under development by the Company may be disrupted or delayed by a variety of factors, including market acceptance, the introduction of new products by competitors, and changes in regulations or laws. The foregoing list of factors is not inclusive. We undertake no obligation to update the forward-looking statements unless required by law.



# Our Strengths



Global positions are Showa Denko estimates

## 1 HD media

The world's largest independent manufacturer HD media, one of the major parts of HD drives, are used in notebook PCs, consumer electronics, and external hard disk drives. Demand will grow further for use in servers for cloud computing.

## 2 Graphite electrodes

The world's leading manufacturer of large-diameter (30- and 32-inch) graphite electrodes We are a representative manufacturer in Asia of graphite electrodes used in electric arc furnaces for steel production. In terms of large-diameter electrodes of 30 inches or more, we are the leading company in the world.

## 3 Aluminum laminated film for LIB packaging

The second largest manufacturer in the world We provide packaging materials for pouch-type lithium ion batteries (LIBs) used in smartphones and tablet PCs. Demand for pouch-type LIBs is growing due to such advantages as high levels of heat dissipation and flexibility in molding.

## 4 Semiconductor-processing high-purity gases

The world's largest manufacturer of HBr and Cl<sub>2</sub> Semiconductor-processing high-purity gases are used as etching and cleaning gases, and materials for membrane formation, which are necessary for production of electronic devices including semiconductors, LCD panels, and solar batteries.

## 5 High-purity aluminum foil for capacitors

The world's largest manufacturer We provide high-purity aluminum foil for aluminum electrolytic capacitors, which are widely used in air conditioners, automotive parts, and solar power generation. Our proprietary manufacturing process has enabled us to realize high productivity and quality.

## 6 Aluminum cylinders for printers

The world's largest manufacturer We provide high-precision, mirror-finished aluminum cylinders for use in laser beam printers. Utilizing our production lines suited for mass production, we are supplying the cylinders to the world market from our plants in Japan, the United States, and China.

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# Consolidated Five-year Summary

## Financial Highlights

Showa Denko K.K. and Consolidated Subsidiaries					Thousands of U.S. dollars (Note 1)	
Millions of yen						
December 31	2010	2011	2012	2013	2014	2014
<b>For the year</b>						
Net sales	¥797,189	¥854,158	¥739,811	¥848,071	¥876,580	\$7,271,503
Operating income	38,723	47,357	28,108	25,953	20,915	173,494
Net income	12,706	16,980	9,368	9,065	3,500	29,036
Net cash provided by operating activities	66,293	69,437	53,310	63,565	65,996	547,457
Net cash provided by (used in) investing activities	(49,074)	(38,672)	(40,209)	(46,738)	(47,225)	(391,745)
Free cash flow	17,219	30,765	13,101	16,827	18,771	155,712
Capital expenditures	58,035	38,794	42,503	44,370	47,318	392,520
Depreciation and amortization (Note 2)	50,678	49,413	46,232	39,779	40,673	337,399
<b>At year-end</b>						
Total assets	924,484	941,303	933,162	985,771	1,011,083	8,387,249
Total net assets	284,965	295,745	314,966	345,811	320,504	2,658,683
Interest-bearing debt	351,034	347,308	342,262	353,686	383,124	317,813
Debt/equity ratio (Times)	1.23	1.17	1.09	1.02	1.20	
Yen					U.S. dollars (Note 1)	
<b>Per share</b>						
Net income—primary (Note 3)	¥ 8.49	¥ 11.35	¥ 6.26	¥ 6.06	¥ 2.38	\$ 0.02
Net income—fully diluted (Note 3)	—	11.20	—	—	—	—
Net assets	161.47	168.33	182.24	201.27	210.16	1.74
Cash dividends (applicable to the period)	3.00	3.00	3.00	3.00	3.00	0.02
Number of employees at year-end	11,597	11,542	9,890	10,234	10,577	

Notes: 1. Yen amounts have been translated into U.S. dollars, for convenience only, at the rate of ¥120.55 to US\$1.00, the approximate rate of exchange at December 31, 2014.

2. Effective from the year ended December 31, 2011, the Companies have applied "Accounting Standard for Disclosures about Segments of an Enterprise and Related Information" (Accounting Standards Board of Japan (ASBJ) Statement No. 17, issued on June 30, 2010) and "Guidance on the Accounting Standard for Disclosures about Segments of an Enterprise and Related Information" (ASBJ Guidance No. 20, issued on March 21, 2008). The segment information for the year ended December 31, 2010, which is restated under the accounting standard, is disclosed for comparison purposes.

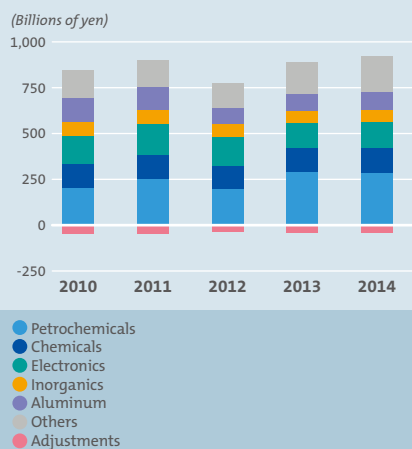
3. Net income per share has been computed based on the average number of shares of common stock outstanding during the respective fiscal year. Fully diluted net income per share additionally assumes the conversion of the convertible bonds. Diluted net income per share in 2014 was not disclosed because there was no dilutive stock at December 31, 2014. Diluted net income per share for 2013, 2012 and 2010 was not disclosed because the Company had no securities with dilutive effects.

## Non-Financial Highlights

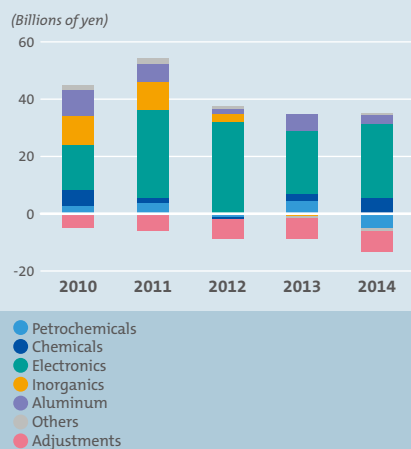
	2009	2010	2011	2012	2013
<b>Environmental data</b>					
Discharged amounts of greenhouse gases (kt-CO <sub>2</sub> )* (Showa Denko Group)	2,829	2,732	2,660	2,496	2,645
Final landfill volumes of industrial waste (t)* (Showa Denko Group)	2,752	2,591	2,144	2,085	1,360
<b>Social data</b>					
Frequency rate of lost-time injuries (Showa Denko Group)	0.29	0.14	0.13	0.14	0.22

\*Aggregate calculation in each fiscal year

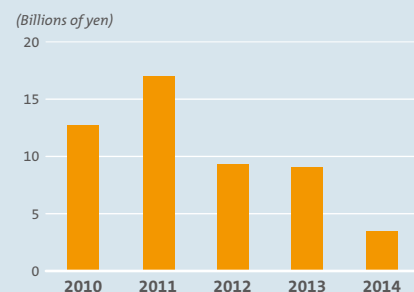
## Net Sales by Segment



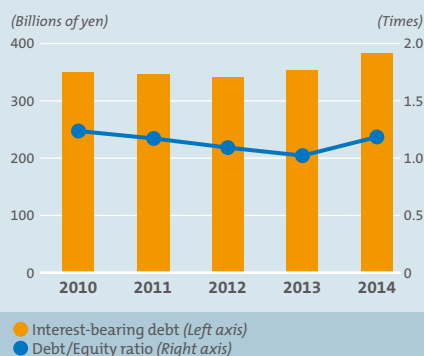
## Operating Income by Segment



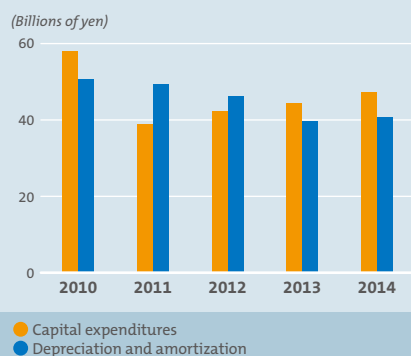
## Net Income



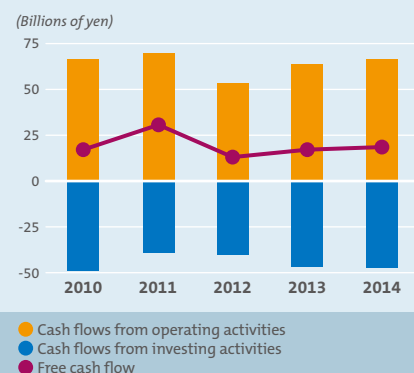
## Interest-Bearing Debt Debt/Equity Ratio



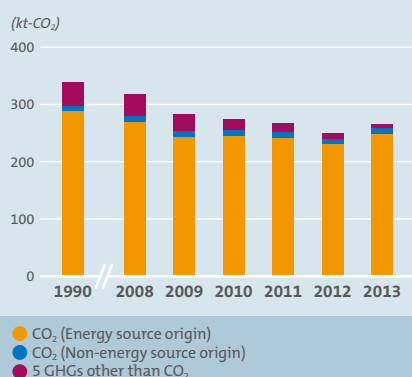
## Capital Expenditures Depreciation and Amortization



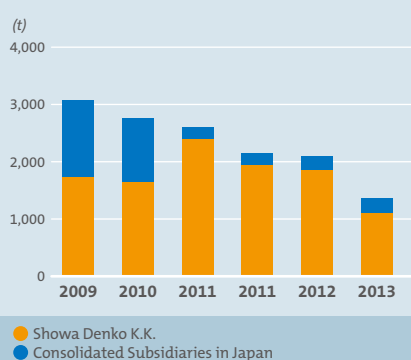
## Cash Flows



## Trends in Greenhouse Gas Emissions



## Trends in the Final Volume of Landfill Disposal



## Environment-Related Investment



# Message from the Management



*Kyohei Takahashi, Chairman of the Board (left) and Hideo Ichikawa, President and CEO*

**With regard to the Showa Denko Group's business environment in 2014, in the Japanese economy, there was an improvement in the labor market due to recovery in corporate profits, especially in export-related industries, resulting from rapid depreciation of the yen triggered by the recent economic policy of the Japanese government and the easy-money policy of the Bank of Japan. However, consumer spending was sluggish owing to the consumption tax hike.**

As for overseas economies, while the US economy recovered steadily, the Chinese and ASEAN economies showed a mild recovery with decelerated growth. On the other hand, the European economy showed a more stagnant mood during the second half of 2014, and economies of resource-producing countries including Russia slowed down.

In the petrochemical industry, operating rates at domestic plants continued at high levels, reflecting strong demand in China. However, in the second half of the year, crude-oil prices plunged, resulting in a large drop in prices of oil-related materials and products. The electronic parts/materials industry remained firm, due mainly to increased overseas production of semiconductors.

Under these circumstances, the Showa Denko Group launched in 2014 "PEGASUS Phase II" business plan for the 2014-2015 period as the second half of the ongoing five year consolidated business plan "PEGASUS."

To strengthen its presence on the global market as an individualized chemical company, the Group is promoting its growth strategies in which the hard disk (HD) media and graphite electrode (GE) businesses serve as its "Wings." Furthermore, the Group will continue accelerating business expansions in the growing Asian market in the areas of aluminum cans, high-purity aluminum foil, semiconductor-processing high-purity gases, and functional chemicals, positioning them as "Growth" businesses (See pages 9–12).



The Group recorded consolidated net sales of ¥876,580 million in 2014, up 3.4% from the previous year. While sales in the Petrochemicals segment decreased due to the fall in shipment volumes resulting from the periodic large-scale shutdown maintenance that takes place once in every four years, sales in the five other segments increased, due mainly to higher shipment volumes. Operating income decreased 19.4%, to ¥20,915 million. While the Chemicals, Electronics, and Inorganics segments recorded higher income than the previous year, the Petrochemicals segment recorded lower income due to the sharp drop in naphtha prices at the end of the year, in addition to the influence of the shutdown maintenance. The Aluminum segment also recorded lower income due to the rise in prices of aluminum ingots, and the Others segment recorded a slightly larger operating loss. The Group posted a net income of ¥3,500 million, down 61.4%, due partly to the increase in loss on sales and retirement of noncurrent assets and loss on valuation of investment securities.

Dividends of ¥3.00 per share were paid to shareholders on record at the end of December 2014. Moreover, in 2014, Showa Denko decided to repurchase its own shares for the first time, in order to improve shareholder returns. The total number of shares repurchased was 68,261,000 (equivalent to about ¥10 billion).

As for our capital investment in 2014, we completed establishment of new facilities to produce aluminum cans for coffee beverages, establishment of a new ethyl acetate plant, expansion of lithium ion battery (LIB) packaging film production capacity, and expansion of our ability to produce SiC epitaxial wafers for power devices. We also made capital investments to ensure future growth, including expansion of the capacity for producing graphite electrodes in the United States, expansion of high-purity ammonia production capacity in China and establishment of a new high-purity N<sub>2</sub>O base in South Korea to strengthen our high-purity semiconductor-processing gas business, and a decision to expand high-purity aluminum foil production capacity in China. As a result, our capital expenditures in 2014 amounted to ¥47,318 million, up ¥2,948 million.

The outstanding balance of interest-bearing debt as of the end of 2014 rose ¥29,438 million from the end of the previous year, to ¥383,124 million, due partly to the refinancing of existing hybrid securities by a subordinated loan and additional consolidation of subsidiaries. Meanwhile, the D/E ratio rose to 1.20.

## Segment Performances

A breakdown of net sales and operating income by segment is as follows:

In the **Petrochemicals** segment, sales decreased 1.9%, to ¥281,400 million. Sales of olefins decreased owing to the fall in shipment volumes resulting from the shutdown maintenance that takes place once in every four years. Sales of organic chemicals increased owing to the rise in shipment volumes of vinyl acetate and ethyl acetate.

The segment recorded an operating loss of ¥4,930 million, down ¥9,328 million, due to the influence of the shutdown maintenance and the sharp decline in naphtha prices toward the end of the term.

In the **Chemicals** segment, sales increased 6.4%, to ¥139,064 million. Sales of basic chemicals increased due to the rise in the volume of chloroprene rubber exports and the rise in acrylonitrile market prices, notwithstanding lower sales of liquefied ammonia. Sales of industrial gases were maintained at the previous year's level. Meanwhile, sales of electronic chemicals increased due to higher shipment volumes to East Asia. Sales of functional chemicals increased slightly.

Operating income of the segment increased 113.4%, to ¥5,460 million.

In the **Electronics** segment, sales increased 1.5%, to ¥138,537 million. Sales of HD media increased due to steady shipments for PC and other applications. Sales of rare earth magnetic alloys decreased due to lower shipment volumes. Meanwhile, sales of compound semiconductors increased due to higher shipment volumes.

Operating income of the segment increased 17.5%, to ¥25,770 million, due mainly to the diminishing influence of reductions in the book value of rare earth inventories in the previous year.

In the **Inorganics** segment, sales rose 2.5%, to ¥67,557 million. While oversupply of steel continued in Asia, steel demand recovered gradually in the United States and Japan. Thus, sales of graphite electrodes increased slightly due to higher shipment volumes. Sales of ceramics increased due to higher shipment volumes of abrasives and other ceramic products.

The segment recorded an operating loss of ¥300 million, an improvement of ¥538 million.

In the **Aluminum** segment, sales rose 8.4%, to ¥97,956 million. Sales of rolled products were up due to the rise in shipment volumes of high-purity foils for aluminum electrolytic capacitors, reflecting increased production by capacitor manufacturers for such applications as electric appliances and vehicles. Sales of aluminum specialty components increased due to higher shipment volumes for automotive parts applications. Sales

# Message from the Management (cont.)



of aluminum cans increased following the acquisition and consolidation of Hanacans Joint Stock Company, a manufacturer of aluminum beverage cans in Vietnam.

Operating income of the segment fell 48.7%, to ¥2,999 million, due to the sharp rise in aluminum ingot prices.

In the **Others** segment, sales increased 10.5%, to ¥195,024 million. Sales of LIB materials were maintained at the previous year's level. Shoko Co., Ltd.'s sales increased. SDK's consolidation of BE International Corporation, a subsidiary of Shoko Co., Ltd., also increased the sales of the segment.

The segment recorded an operating loss of ¥678 million, down ¥52 million.

## Working to Accomplish “PEGASUS Phase II”

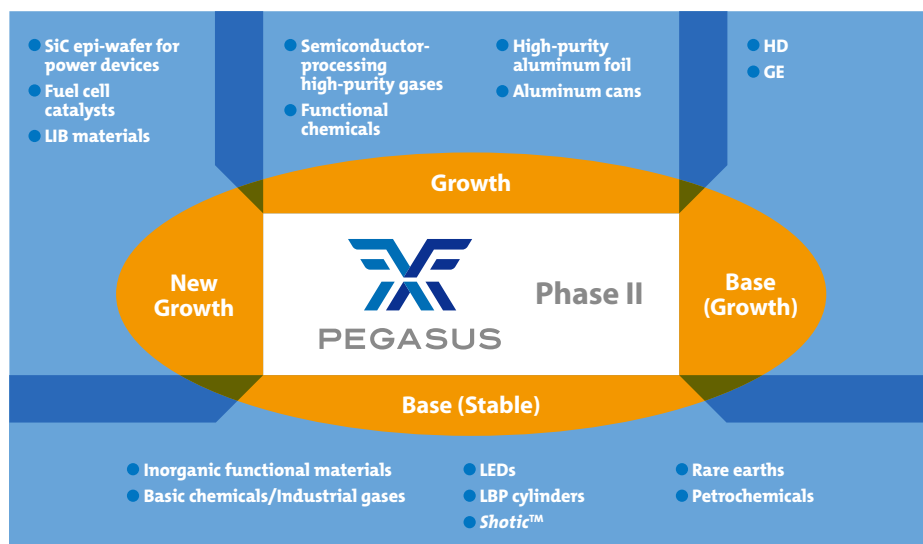
The Group is now implementing its “PEGASUS Phase II” business plan launched in 2014. The most important theme of this business plan is to make the Group return to its growth track. To attain this, the Group has been strengthening its existing businesses and implementing strategies to expand its “Growth” businesses by honestly working on specific measures including revision of its business portfolio, restructuring of each business, and concentration of its R&D efforts on promising themes. The Group will accelerate implementation of its growth strategies by allocating its management resources intensively to the “Growth” businesses with global competitiveness.

### a) “Base (Growth)” businesses

HD media and graphite electrodes are positioned as the main businesses of the Group. We will improve their profitability by increasing their competitive power on a global scale and reducing costs. The two businesses will serve as major contributors to our profit and cash flows. Specifically, in our HD media business, we will enhance our marketing efforts in the field of HD media for near-line servers mainly used in data centers. In our graphite electrode business, we will strengthen our marketing activities to promote high-end products, giving priority to the US market.

### b) “Growth” businesses

We have classified the business in aluminum cans, high-purity aluminum-foil, semiconductor-processing high-purity gases, and functional chemicals as “Growth” businesses. We will preferably allocate resources, aiming to expand them mainly in the growing Asian market. Demand for high-purity industrial gases for producing semiconductor devices and small-size LCDs is rapidly growing mainly in East Asian countries. In order to expand our semiconductor-processing high-purity gas business, we have adopted “Matrix Strategy,” in which we pursue in each semiconductor-processing East Asian country the best combination of our high-purity gas products and establishment or expansion of our production/delivery bases. We are also expanding our functional chemicals business in the growing Chinese and ASEAN markets, focusing on the field of automotive parts, which is the main market for our products. We will increase the sales of high-purity aluminum foil for capacitors with a focus on high-end products, in order to respond to the increase in demand in the Chinese market for capacitors used



“PEGASUS Phase II” Business Portfolio



in home electric appliances including air conditioners. As for our business in aluminum cans, we will further expand it in the growing Vietnamese market, by modernizing production facilities of the Vietnamese aluminum can manufacturer Hanacans, which we acquired in 2014, and establishing can lid production lines by the end of 2015.

#### c) "New Growth" businesses

We will aim to focus our R&D efforts on quick establishment of new businesses covering promising themes. Since LIB materials and SiC epitaxial wafers for power devices are now shifting to the phase of market expansion, we will expand our businesses in these fields and implement establishment of business models.

#### d) "Base (Stable)" businesses

In this business category, which includes petrochemicals and basic chemicals, we will take aggressive measures to boost their cost competitiveness, aiming to improve their profitability. While carrying out our growth strategies, we decided and implemented restructuring, downsizing or withdrawal from businesses that were judged to be suffering from deterioration of profitability and would not allow us to have a strong presence in the future. In 2014, as a measure to restructure our business, we withdrew from production of ethyl acetate in Indonesia, and as a measure to streamline our business bases, we transferred our production base for chemical alumina from Yokohama to Indonesia, and implemented integration and concentration of ceramics business related subsidiaries. As a result of these measures to terminate unprofitable businesses and streamline production bases, our "Base (Stable)" businesses started to show improvement in profitability.

#### e) Overseas business strategy

We will expand operations in growing markets, centering on Asia. In addition to the capacity expansion in our graphite electrode business, which is one of our main businesses, we are now expanding the scale of our operations overseas, centering on the growing Chinese and ASEAN markets, with emphasis on the four "Growth" businesses including semiconductor-processing high-purity gases.

2015 is the final year of PEGASUS, and also the year for us to formulate the new growth strategies of the Group by settling the next medium-term consolidated business plan. There are many fields where the Showa Denko Group can make social contributions, including a contribution toward realization of a clean-energy-based society. We will announce the new medium-term consolidated business plan of the Group by the end of 2015, in which we will clarify the Group's strong points and clearly state measures and targets to further enhance the Group's competitive advantages.

### Measures Implemented or Decided in 2014

#### 1. Starting commercial production of 3.5-inch HD media with the world's highest capacity

The leading-edge 3.5-inch HD media produced and sold by SDK have been adopted in eight-terabyte hard disk drives (HDDs), the world's highest storage capacity HDDs to date. The 3.5-inch HD media have data storage capacity of 1.1–1.3 terabyte per platter, and are classified as the seventh generation products of the HD media based on the perpendicular magnetic recording (PMR) technology.

As the world's largest independent HD media supplier, we will aim to ensure stable supply of high-capacity media, and continue meeting customers' expectations in terms of quality as well as quantity.

#### 2. Start-up of new ethyl acetate plant based on new technology

We started producing ethyl acetate at our new plant in Oita Complex, using a new technology. Ethyl acetate is an organic solvent used in wide-ranging applications, including printing ink, paint, and adhesive for liquid crystal display (LCD) panels. At the new plant, we have introduced our proprietary technology that adds acetic acid directly to ethylene, enabling production of low-cost and high-quality ethyl acetate.

#### 3. Completion of the expansion of LIB-packaging film production capacity

Our subsidiary Showa Denko Packaging Co., Ltd. completed the expansion of its capacity at its Hikone Plant for producing LIB-packaging aluminum laminated film. The production capacity has tripled compared to the 2010 level.

The market for LIB-packaging aluminum laminated film continues to grow. Demand for the film is expected to grow for use in large LIBs for automotive applications due to the progress in electrification of cars, in addition to demand for use in small LIBs for smartphones and tablet PCs.

# Message from the Management (cont.)

## 4. Expansion of capacity to produce 6-inch SiC epitaxial wafers for power devices

We expanded our capacity to produce 6-inch SiC epitaxial wafers for power devices from 400 units a month to 1,100 units a month. We also started shipping of SiC epitaxial wafers of a new grade with improved quality, to be used in power control modules for automobiles and other applications that require heavy withstanding currents.

When compared with the currently mainstream silicon-based semiconductors, SiC epitaxial wafer based power devices can operate under relatively high-temperature, high-voltage, and heavy-current conditions, while substantially reducing energy loss. With these features, SiC power devices are expected to be in greater demand for use in automobiles, power sources for servers, electric trains, decentralized power generation systems utilizing new energy sources, and other applications. The market size of SiC power devices is expected to grow to be about ¥30 billion in 2020.

The Group will continue contributing to the sound growth of society by developing and providing useful and safe technologies, products, and services. We will ensure safety, conserve resources and energy, and reduce the volume of industrial waste to be discharged and chemical substances to be emitted, thereby contributing to the protection of the global environment.

Utilizing our proprietary technical advantages, we will provide components, materials, and solutions in the areas of advanced technologies so that we can contribute toward creating a society where affluence and sustainability are harmonized. Thus, we will aim to increase our corporate value and promote the common interests of our shareholders.

We will continue to enhance corporate governance, focusing on the following points of view, in order to ensure sound, effective and transparent management, as well as to really become “a company that contributes to the sound growth of society,” which continuously improves its own corporate value and consequently is trusted and appreciated by society.

- (1) Strengthening compliance**
- (2) Strengthening management monitoring and supervisory functions**
- (3) Clarifying management responsibilities**
- (4) Ensuring rapid, effective decision making and business execution**
- (5) Strengthening the information disclosure system**



The world economy is undergoing drastic changes in its market structure. The Showa Denko Group will aggressively strengthen its overseas presence, centering on the growing Asian market, and provide high-performance products and advanced technologies required by the market, thereby continuing to meet customer expectations and social needs.

We look forward to the continued support from our fellow shareholders and all other stakeholders.

March 27, 2015

**Kyohei Takahashi**  
Chairman of the Board

**Hideo Ichikawa**  
President and CEO

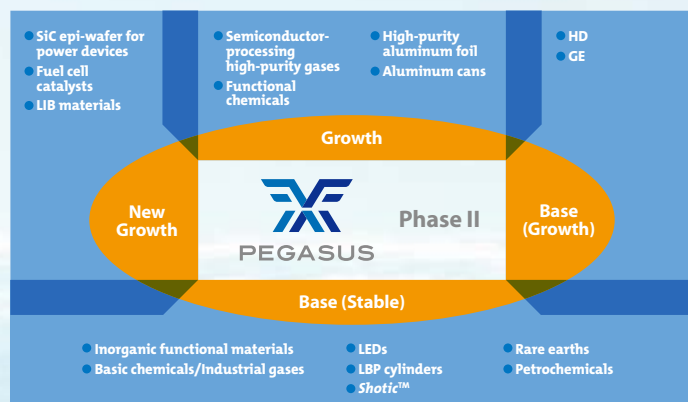
# Achievements of Medium-Term Business Plan: “PEGASUS Phase II” (2014–2015)

We are pursuing our strategy to promote growth and strengthen respective businesses under “PEGASUS Phase II” for the 2014–2015 period, the latter part of our five-year consolidated business plan that began in 2011. In view of the drastic changes in the business environment and significant structural changes in the world economy, we are accelerating our growth strategy, promoting structural reforms, and consolidating R&D themes.

In order to improve profitability of each business and the Showa Denko Group as a whole, we are continuing to review our business portfolio to cope with the changes in the business environment and clarify the positions of respective businesses. We are carefully selecting capital investment items, putting emphasis on businesses in the “Growth” category. As to R&D investments, we are concentrating resources on promising projects classified in the “New Growth” category, aiming to speedily realize good results.

## Business portfolio

Following the implementation of structural reforms under “PEGASUS Phase I,” we are strengthening our business portfolio in the Phase II period in an effort to return to a growth track. Specifically, we have classified four businesses in the “Growth” category, in which we can utilize our proprietary technologies and take part in the rapidly growing Asian market. We are accelerating growth in these business areas through aggressive capital investments and M&A efforts.



## Base (Growth)

We are taking measures to strengthen the competitive power of the HD media and graphite electrode (GE) businesses, which continue serving as “Wings,” so that we can speedily return to a growth track.

## Growth

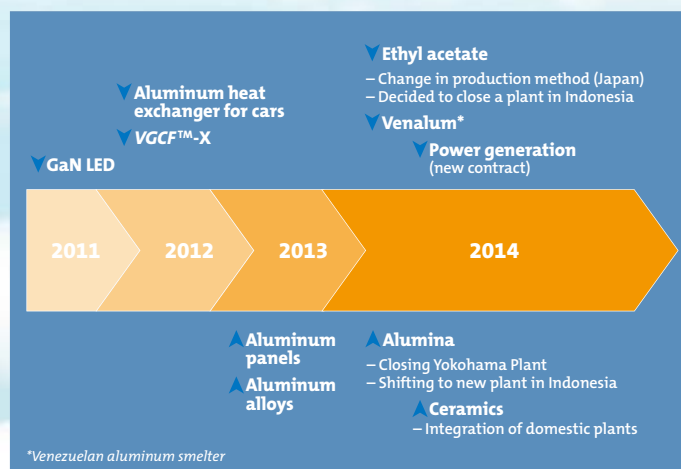
The “Growth” category consists of four business areas, namely, aluminum cans, high-purity aluminum foil, semiconductor-processing high-purity gases, and functional chemicals. In all of these areas, we have unique strengths in terms of technologies and materials, and expect to capture opportunities in the rapidly growing Asian market. We are preferentially allocating resources to these businesses during the Phase II period, accelerating their growth in overseas markets.

## New Growth

In this category, we expect that big markets will appear within several years for silicon carbide (SiC) epitaxial wafers for power devices, fuel cell catalysts, and lithium-ion battery (LIB) materials. We will develop such new businesses by promoting R&D and allocating resources, aiming to establish them as next key businesses of ours.

## Structural reforms

While promoting growth strategies under PEGASUS, we have carried out structural reforms, mainly in the Base (Stable) category. As for businesses with deteriorating profitability, reflecting changes in the market and competitive conditions, and judged that we will not be able to regain a strong presence in the future, we have taken measures to either reduce the scale of operations or withdraw from such businesses. In particular, we transferred our aluminum automotive heat exchanger business to Keihin Corporation, and shifted our chemical alumina production site to Indonesia. Meanwhile, we decided to terminate ethyl acetate production in Indonesia.







“PEGASUS Phase II”  
Four “Growth”  
businesses

## Accelerating growth strategies and penetrating into overseas markets, centering on Asia

The Showa Denko Group is accelerating its penetration into overseas markets, focusing its efforts on expanding the scale of the four “Growth” businesses in the growing Asian market.



### China

(High-purity aluminum foil, Semiconductor-processing high-purity gases, GE)



### Taiwan

(Semiconductor-processing high-purity gases)



### Korea

(Semiconductor-processing high-purity gases)



### U.S.A.

(GE)



### Vietnam

(Rare earths, Aluminum cans)



### Malaysia

(SHOTIC™)



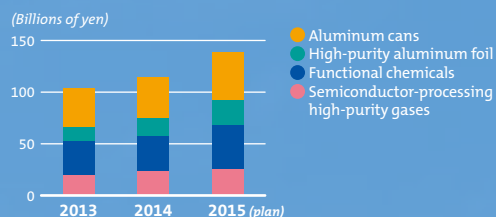
### Indonesia

(Ceramics)



### Sales in four “Growth” businesses

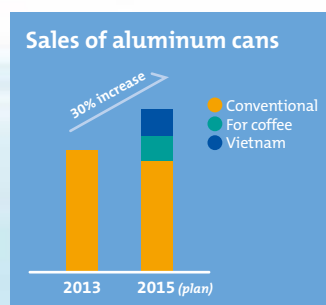
Accelerate business expansion centering on Asia



## Four “Growth” businesses

### 1 Aluminum cans

As a pioneer in this area, the Group has established a strong presence in the Japanese market. To penetrate into the growing Asian market based on its high productivity and advanced printing technology, the Group acquired Hanacans, of Vietnam, in May 2014. The volume of beer production in Vietnam is growing in line with the economic growth in that country, and is expected to surpass that of Japan in several years' time. We will meet the growing demand for aluminum cans and steadily increase our market share in Vietnam.



### 2 High-purity aluminum foil

High-purity aluminum foil is a major material for electrolytic capacitors, which are used in wide areas such as electric appliances (LCD TVs and air conditioners), IT devices (PCs), electric vehicles, and new energy (wind and solar power). In particular, electrolytic capacitors are increasingly used in the Chinese market, mainly for such high-end applications as air conditioners. As a result, the importance of our high-purity aluminum foil is increasing. We expanded our capacity at the “mother plant” in Sakai, Japan, in March 2014. Furthermore, we expanded the production capacity at our subsidiary Showa Denko Aluminum (Nantong) Co., Ltd., in Nantong, China, to meet rapidly growing demand in that country. The expanded facility started operations in March 2015. We will continue providing capacitor-grade high-purity aluminum foil to many customers inside and outside Japan, fully utilizing our position as a leading company with a proprietary process technology for refining aluminum metal.





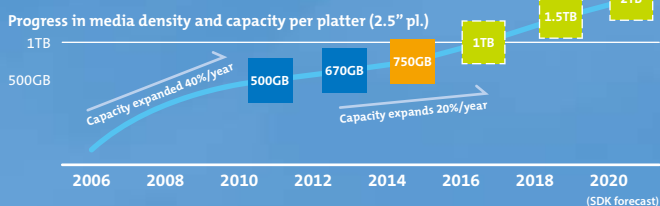
## “PEGASUS Phase II” Base (Growth): Wings

### HD

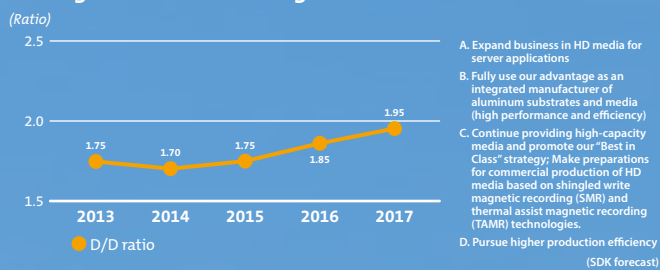
There is an ongoing shift of HDD applications from PCs to servers. HDD shipments in 2014 totaled 565 million units, representing the first increase in volume in four years. Due to increased investments in data centers, HDD demand is expected to grow rapidly for applications in nearline servers for cloud computing, an area with higher disk per drive (D/D) ratios. As a result, HD media shipments are also expected to grow. In March 2015, we became the world's first to place on the market 2.5-inch, 750GB/platter HD media based on the eighth-generation perpendicular magnetic recording (PMR) technology. We will continue developing 1TB/platter HD media to meet the market demand for products with higher storage capacity.

#### SDK continues displaying technology leadership

2.5" Marketed 8th generation media (750GB/pl.) with PMR technology  
— Accelerate technology development to realize 1TB/pl.  
3.5" Started commercial production of 1.1-1.3TB/pl. media



#### Strategies for HD business growth



### GE

As another "Wing" of PEGASUS, the graphite electrode business will be strengthened during the Phase II period. We will work to improve the profitability of the business in preparation for growth in the Post-PEGASUS period.

Demand for electric steel is improving in the United States, and signs of recovery are seen in Japan, centering on automotive applications. However, China's overproduction of steel is still affecting the ASEAN market, and it will take some time before the significant supply-demand imbalances are corrected. In 2015, our subsidiary Showa Denko Carbon, Inc. (SDKC) will complete its expansion project, and gradually increase its operating rate in response to the growing demand in the U.S. market. SDKC will aim to increase shipment volumes, centering on high-end, large-diameter electrodes. At our plant in Omachi, Japan, we will renovate production facilities step by step, thereby improving productivity.



Graphite electrodes being used in an electric arc furnace

## 3 Semiconductor-processing high-purity gases

Production of semiconductor devices and small LCDs in East Asia is expected to continue increasing. We are expanding our business in semiconductor-processing high-purity gases, taking advantage of our strengths in the area of ammonia (NH<sub>3</sub>), hydrogen bromide (HBr), nitrous oxide (N<sub>2</sub>O), and chlorine (Cl<sub>2</sub>). To meet growing demand in East Asia, we are promoting local production and extending the delivery network. In March 2015, we started production of high-purity N<sub>2</sub>O in South Korea. We will aim to speedily achieve the effect of our acquisition of a high-purity Cl<sub>2</sub> business in Taiwan and continue to strengthen our operations, including the supply chain system in China.

#### Accelerate growth through matrix strategy

	NH <sub>3</sub>	N <sub>2</sub> O	HBr	Cl <sub>2</sub>	Other gases	Infra-structure
Application	Material gas		Etching			
Japan		Increase (2015)	Increase (2015)		New/Increase (2015)	
China	Increase (2015)				New/Increase (2015)	New site (2015)
Taiwan	Increase (2015)			Acquisition (2014)		Expansion (2014)
Korea		Increase (2015)				
Singapore						Expansion (2014)

## 4 Functional chemicals

In this field, we are expanding operations in the growing market in China and ASEAN countries, centering on the area of automotive parts. We are meeting growing demand for our bulk molding compound (BMC) products for use in automotive lamp reflectors and motor sealing materials for hybrid cars. As BMC sales have been growing at an annual rate of 15% on the average since 2007, we have decided to build a new plant in Zhuhai, China, in addition to our existing site in Shanghai. Meanwhile, the biodegradable plastic market is being built up on a full scale, reflecting the tightening environmental regulations in Europe and China. Our biodegradable plastic *Bionolle*™ has been used by our customers in foreign countries, including Italy and China, since 2014 due to its high biodegradability. The volumes of production and sales of *Bionolle*™ started to grow in 2014. Demand is also growing for our vinyl ester and emulsions for use in homes and plant facilities. We will continue strengthening our supply chains, aiming to expand the functional chemicals business in overseas markets.



“PEGASUS Phase II”

## Our business models

The Showa Denko Group’s 11,000 employees are working around the world to increase the corporate value, fully utilizing available resources and using the Group’s proprietary technologies as the driving force.

## Contribution to society

We aim to contribute toward creating a society where affluence and sustainability are harmonized. All members of the Group are united in pursuing the goal, aiming to increase the Group’s corporate value.

## Our strengths

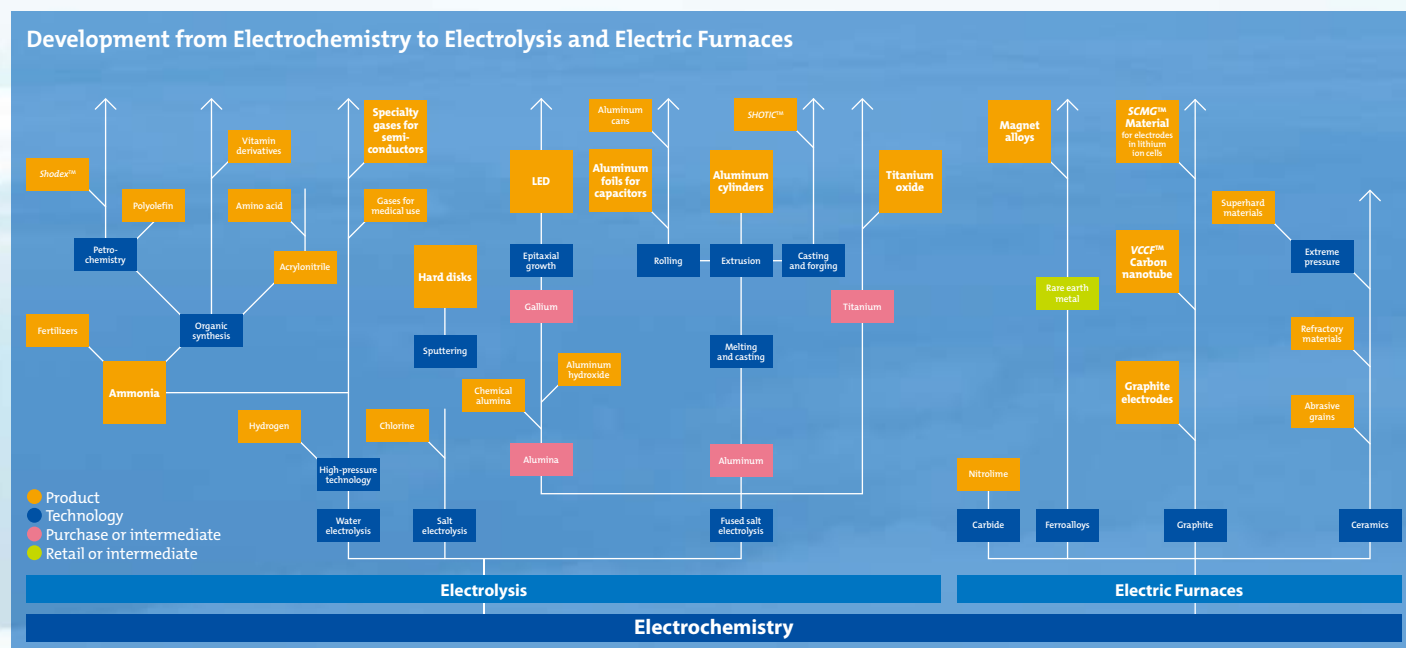
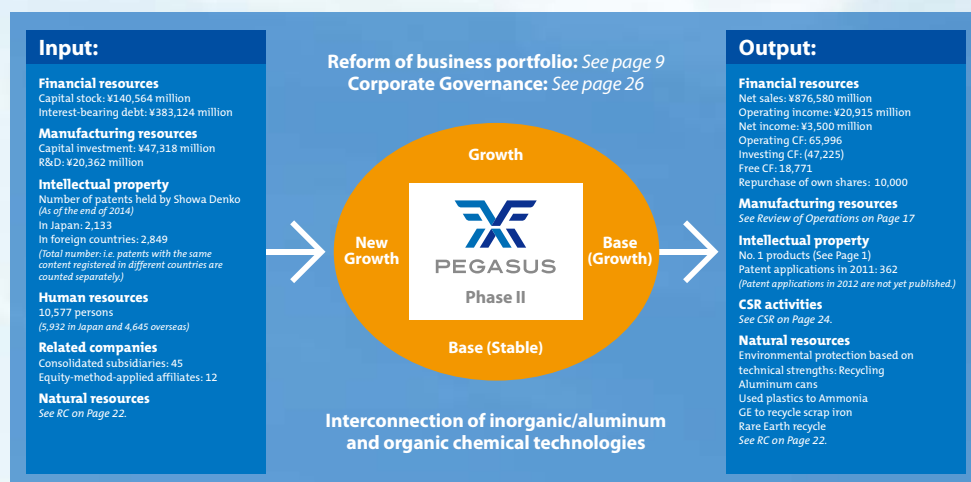
**Interconnection of inorganic/aluminum and organic chemical technologies.**

The source of our value creation is our technical strengths. We concentrate on R&D activities, creating a rich stock of unique and superior technologies and materials through interconnection of inorganic/aluminum and organic chemical technologies. Based on that, we have accumulated a number of world-leading products in the area of advanced technologies.

## Technological background

Showa Denko K.K. was established in 1939 through the merger of Showa Fertilizers K.K. (the first to produce ammonia in Japan by a domestically developed process) and Nihon Electrical Industries K.K. (the first in Japan to commercially produce aluminum). Our technical development began with focused attention on the potential of electrochemistry, in view of the abundant hydropower resources in Japan.

Starting from electrochemistry, our Group has continued to develop technologies in the areas of inorganic/organic chemicals and metallic materials. At present, we have various advanced materials and components for IT and automotive industries as well as wide-ranging products necessary for daily life. Our product portfolio includes HD media, semiconductor-processing high-purity gases, and LIB materials for the IT industry; BMC and aluminum components for the automotive industry; and cosmetic raw materials and aluminum beverage cans useful for daily life.



# Research and Development

Showa Denko and its Group companies are promoting R&D in line with the medium-term consolidated business plan “PEGASUS,” allocating resources preferentially to the two business domains of “Energy/Environment” and “Electronics.” We are pursuing our strategy of promoting the interconnection of inorganic, aluminum, and organic chemical technologies, while attaching great importance to marketing activities both at home and abroad. We are also focusing on early manifestation of fruits of businesses that will lead the growth of our Group in the future, including businesses of advanced battery materials, high-performance optical films, SiC epitaxial wafers, and plant factory systems.

Moreover, in order to strengthen our technologies and expand our businesses in line with “PEGASUS Phase II,” which we launched in 2014 as the latter half of “PEGASUS,” we are now strategically allocating our R&D resources preferentially to “Base (Growth)” and “Growth” businesses such as hard disk media, functional chemicals, and high-purity aluminum foil. In the same context, we are also allocating our R&D resources preferentially to businesses in the category of “New Growth,” which we expect to become our key businesses in the next generation.

To be specific, in order to strengthen our existing key businesses, we are working on acceleration of development of hard disk media with more storage capacity, expansion of uses of composite materials made from functional chemicals, and performance improvement of high-purity aluminum foil for domestic customers.

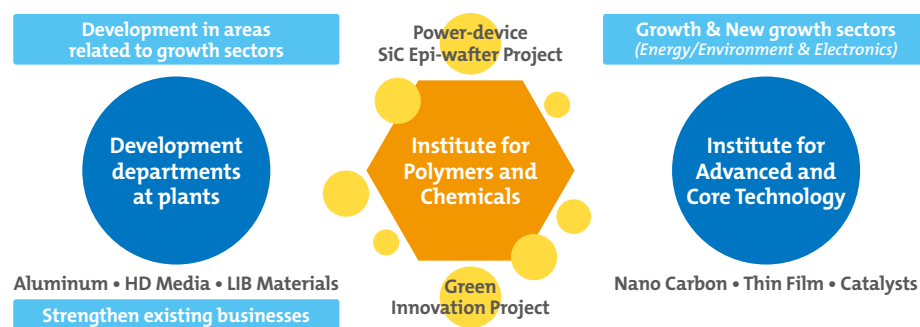
As for the “New Growth” businesses, we are preferentially allocating our R&D resources to anode materials for lithium ion batteries, for which the demand continues to grow as applications for smartphones and tablet PCs, and for SiC epitaxial wafers, which are used in power devices with more energy efficiency and the demand for such devices is expected to grow in the medium- and long-term perspective.

On the other hand, we terminated development of VGCF™-X and organic electroluminescence lighting devices, and reallocated R&D resources to more promising themes.

## R&D Organization

We continue to have R&D organization that assembles technical experts for specific areas at the Business Development Center. The Center consists of two laboratories (Institute for Polymers and Chemicals, and Institute for Advanced and Core Technology), two technical assistance centers serving all business segments (Analysis & Physical Properties Center, and Safety Evaluation Center), and two projects for commercialization (Power-Device SiC Epitaxial Wafer Project, and Green Innovation Project). Institute for Polymers and Chemicals, in cooperation with divisions and plants, performs R&D to add value to existing businesses and products, R&D to cultivate promising peripheral areas of existing businesses and products, and strengthens businesses through provision of advanced technical support for products. Institute for Advanced and Core Technology promotes creation of next-generation business themes focusing on promising core materials and core technologies that enable us to take advantage of our long-term strong points, selected from our wide-ranging proprietary materials and technologies.

Showa Denko and its Group companies invested ¥20,362 million (US\$169 million) in R&D in 2014. A breakdown by segment of R&D efforts and investments during the year is as follows:



# Research and Development (cont.)



## Petrochemicals

To cope with expected tighter butadiene supply-demand balance in the future, we are vigorously developing processes to produce target butadiene products with improved efficiency, utilizing our proprietary catalyst technologies and business base.

As for acetyl and allyl alcohol products, we are improving performance of existing catalysts and developing new catalysts in order to boost the competitiveness of our products.

We are promoting intensive marketing of our proprietary heat-resistant transparent film *SHORAYAL™* (based on our spectacle lens technology) focusing on the market of materials for displays of mobile devices. Being appreciated for its good optical properties comparable to glass and a smooth feel, *SHORAYAL™* is successfully applied to an increasing number of devices both at home and abroad.

The Petrochemicals segment invested ¥989 million in R&D in 2014.



*SHORAYAL™ pilot plant*



## Chemicals

Regarding “*Shodex™* column,” which is our proprietary high performance liquid chromatography column, we are developing columns applicable to leading-edge technologies, focusing on the markets in advanced countries, and, at the same time, actively cultivating the markets in emerging nations. As for the development of high-performance gel, we are strengthening our R&D system by taking advantage of technical synergy we have obtained through cooperation with a gel developing and manufacturing company in Austria, and conducting sales campaigns for our products in the business field of bio-pharmaceutical manufacturing.

As for base materials for cosmetics, in addition to high-performance vitamin C derivative *Apprecier™*, we are making preparations for launching various new compounds, including methyl hesperidin and carnitine derivative “*Hi-Carnitine*.” In the area of LIB-related materials, we started volume production of “*Polysol™* LB Series” water-based anode binder.

The Chemicals segment’s R&D investment amounted to ¥2,307 million in 2014.



*Shodex™ column*



## Electronics

Aiming to realize volume production of next-generation HD media with higher performance, we are developing shingled magnetic recording (SMR) and heat assisted magnetic recording (HAMR) technologies that will further increase recording density. Meanwhile, we started volume production of 3.5-inch HD media with the world best recording capacity of 1.1–1.3 terabyte per platter, using perpendicular magnetic recording (PMR) technology, which we commercialized for the first time in the world.

Regarding four-element (aluminum, indium, gallium, and phosphide) light emitting diodes, with our proprietary technology we have developed LED chips that emit red light with a wavelength of 660nm, the optimum light for accelerating the growth of plants. These LED chips are used as light sources in many plant factories and model facilities for plant cultivation.

In the area of rare earth magnetic alloys, we are working on further development of technology to produce neodymium-based magnetic alloy that does not contain dysprosium (Dy) but gives the same performance as conventional products in which Dy is added to increase heat resistance.

The Electronics segment invested ¥4,968 million in R&D in 2014.



*HD media*





## Inorganics

We are developing filler materials with high heat dissipation and electrical insulation properties to be used in electronic and power devices.

We have developed *LUMI-RESH™* photocatalyst, which performs high antibacterial and antiviral functions even under visible low-energy light emitted by indoor lighting apparatus. We are opening up new avenues of use for *LUMI-RESH™*, including use in houses, public facilities, and plant factories. In July 2014, *LUMI-RESH™* started to be applied to an indoor-use membrane building material and high-performance curtains to add antibacterial and antiviral functions to these products, in its debut on the market.

The Inorganics segment spent ¥294 million on R&D in 2014.



*Curtains containing LUMI-RESH™*



## Aluminum

Regarding our proprietary *SHOTIC™* aluminum products, we are developing processed aluminum products with gas pressure hot top continuous casting process and gas pressure completely horizontal continuous casting process as core technologies, which we have developed proprietarily, as well as with our forging technology. We are developing continuously cast aluminum rods and forged aluminum products with higher performance for car applications, in order to respond to growing demand for cars in the Asian market.

As for base technologies, we are improving our die technology for extrusion, forging, drawing, and press working; our process technologies for purification, fabrication, and bonding; as well as our simulation technology for structural and hot fluid studies.

The Aluminum segment's R&D investment amounted to ¥1,657 million in 2014.



*SHOTIC™: aluminum forged products*



## Others

In the area of advanced battery materials, we are continuing to develop materials and components that will ensure sufficient capacity, output, life, and low electrical resistance in LIBs for various applications including electric vehicles and mobile devices, such as smartphones. We are providing such solutions as *SCMG™* graphite anode material, high-capacity Si-graphite composite anode material, *VGCF™* carbon nanofiber, and *SDX™* carbon-coated aluminum foil.

As for SiC epitaxial wafers, which attract people's attention as materials for next-generation power devices, we continue working on quality improvement including reduction of crystal defects, as well as production capacity expansion through addition of facilities and improvement of production technologies. More specifically, in 2014, we expanded our production capacity of SiC epitaxial wafers with a diameter of six inches, of which we had started commercial shipments in 2013.

Regarding components for plant growth facilities, we are working to develop the market by offering our Group's products including lighting equipment containing our proprietary ultra-bright LED chips, in combination with licensing of a high-speed plant cultivation technology, the *SHIGYO™* method, which we developed jointly with Yamaguchi University. Our plant factory systems continued to be adopted by many LED-based plant growth facilities in 2014.



*SiC epitaxial wafers*

# Research and Development (cont.)

With regard to printed electronics, we developed printable silver nanowire ink jointly with Osaka University. The product enables free formation of patterns through printing. We are developing its applications, including transparent conductive film.

Furthermore, we are developing fuel cell catalysts that will display high levels of activation with a lower platinum content, when compared with conventional catalysts.

In the field of carbon materials, we are working on technical development to improve our productivity of fullerene, aiming to expand our fullerene business. We are promoting production and sales of nano-carbon products including fullerene via Frontier Carbon Corporation, which we jointly operate with Mitsubishi Corporation. Fullerene is a molecule composed entirely of carbon, and is one nanometer in diameter. It is expected to become a promising resource in the field of electronics to be used, for example, as an anode material for organic thin-film solar cells.

R&D expenditures in 2014 in the Others segment, including common activities, totaled ¥10,146 million.



Cultivation of vegetables using an LED light source



Fullerene products

## Intellectual Property

### Acquisition of intellectual property rights and establishment of patent networks

As the majority of Showa Denko K.K. (SDK)'s businesses are operated globally, we aggressively apply for patents in foreign countries with the aim of supporting those businesses from the intellectual property side.

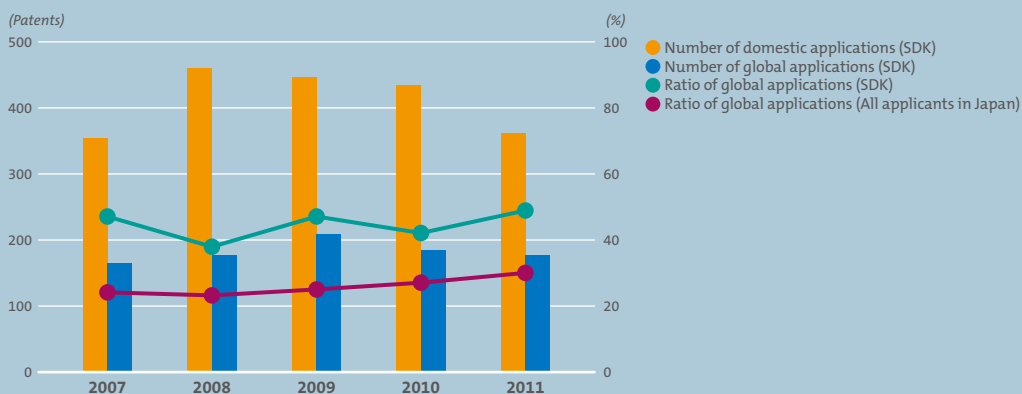
The chart shown below is a composition of data shown in "Japan Patent Office Annual Report 2014" and SDK's own data on the number of applications for patents. It illustrates that SDK's global application ratios has been about 10% higher than those of all applicants in Japan.

We also make every effort to secure our superiority based on intellectual property rights, especially in the principal businesses and newly developed important products by establishing patent networks.

### Risk management

SDK's "Our Code of Conduct and Its Practical Guide" stipulates that we should respect other parties' intellectual property rights. Therefore, in 1996, we built a patent monitoring framework to constantly grasp trends in the intellectual property rights of other parties. In 2005, we started computerizing of this framework. In 2011, we introduced "Shareresearch," a company-wide patent search system developed by Hitachi, and established a framework that enables us to monitor foreign patents as well.

Our Patent Applications in Japan and Abroad





## Consolidated Business Results (Millions of yen)

	2014	2013	Difference	Rate of change
Sales	281,400	286,732	-5,332	-1.9%
Operating income	-4,930	4,398	-9,328	—

The Petrochemicals segment's sales for 2014 decreased 1.9%, to ¥281,400 million. Sales of olefins decreased owing to the fall in shipment volumes resulting from the shutdown maintenance that takes place once in every four years. Sales of organic chemicals increased owing to the rise in shipment volumes of vinyl acetate and ethyl acetate. The segment recorded an operating loss of ¥4,930 million, due to the influence of the shutdown maintenance and the sharp decline in naphtha prices toward the end of the term.

## Olefins

Ethylene production in Japan totaled 6,648,000 tons in 2014, a slight decrease from 6,693,000 tons in the preceding year. SDK's ethylene production in 2014 was 590,000 tons, a decrease of 62,000 tons from the preceding year, reflecting the shutdown maintenance. Operating rate of SDK's ethylene plant in 2014, excluding the period of the shutdown maintenance, exceeded 95% on the average. After the completion of the shutdown maintenance, or in and after May, SDK's ethylene plant virtually operated at full capacity. However, sales of olefins were down due to the fall in shipment volumes resulting from the shutdown maintenance. Operating income fell sharply due to the influence of the shutdown maintenance and the changes in the feedstock situation. Specifically, naphtha prices plummeted toward the end of the term following the sharp decline in crude oil prices, causing the olefin prices to plummet as well. Meanwhile, the cost of olefin production remained at high levels due to the time lag between the purchase of naphtha and the sale of olefins, resulting in a sharp deterioration of the spread. Furthermore, we had to record loss on valuation of inventories at the end of the term.

## Organic Chemicals

Sales of organic chemicals increased due to higher shipment volumes of vinyl acetate and ethyl acetate. Operating income fell due to higher costs, reflecting the rise in raw material prices.

## PETROCHEMICALS TOPICS

### Start-up of new ethyl acetate plant based on new technology

In June 2014, we started producing ethyl acetate at our new plant in Oita Complex, using a new technology.

Ethyl acetate is an organic solvent used in wide-ranging applications, including printing ink, paint, and adhesive for LCDs. At the new plant, we have introduced our proprietary technology (direct addition of acetic acid to ethylene), enabling efficient production of low-cost and high-quality ethyl acetate.



Ethyl acetate plant

### Dissolution of PT. Showa Esterindo Indonesia

We terminated ethyl acetate production at our subsidiary PT. Showa Esterindo Indonesia (SEI) at the end of 2014. We will dissolve the company after dismantling and removing the production facilities. SEI started its operation in 1999, supplying its product to meet steady demand in Southeast Asia. In recent years, however, its business environment became increasingly severe due to the rise in feedstock costs and the increase in supplying capacities in neighboring countries. We therefore concluded that it was difficult for SEI to continue its operation. We recorded an extraordinary loss relating to the termination of SEI's operation and its dissolution.

# Review of Operations (cont.)



## Chemicals

### Consolidated Business Results (Millions of yen)

	2014	2013	Difference	Rate of change
Sales	139,064	130,656	8,408	6.4%
Operating income	5,460	2,559	2,901	113.4%

The Chemicals segment's sales increased 6.4%, to ¥139,064 million. Sales of basic chemicals increased due to the rise in the volume of chloroprene rubber exports and the rise in acrylonitrile market prices, notwithstanding lower sales of liquefied ammonia. Sales of industrial gases were maintained at the previous year's level. Meanwhile, sales of electronic chemicals increased due to higher shipment volumes, reflecting the increase in the production of semiconductors and LCDs in East Asia. Sales of functional chemicals increased slightly. Operating income jumped 113.4%, to ¥5,460 million. Operating income from electronic chemicals rose due to higher shipment volumes. Operating income from basic chemicals was up due to higher market prices of acrylonitrile and greater export volume of chloroprene rubber. Operating income from industrial gases increased, but operating income from functional chemicals decreased due to the rise in costs.

### CHEMICALS TOPICS

#### Expansion of high-purity ammonia production capacity in China

We increased the production capacity for high-purity ammonia (a specialty gas for semiconductor production) at Zhejiang Quzhou Juhua Showa Electronic Chemical Materials Co., Ltd., our manufacturing subsidiary in Zhejiang Province, China, from 1,000t/y to 2,000t/y. The expanded facility started operation in January 2014. Following the expansion, the Showa Denko Group acquired a total high-purity ammonia production capacity of 6,000t/y, consisting of 1,500t/y in Japan, 2,500t/y in Taiwan, and 2,000t/y in China. We will continue to strengthen our supply system to meet the growing demand for high-purity gases in East Asia, where production sites for LCDs and compound semiconductors are integrated.

#### Completion of a new high-purity N<sub>2</sub>O base in South Korea

We concluded a work commissioning agreement with Dooam Industrial, of South Korea, concerning the production of high-purity nitrous oxide (N<sub>2</sub>O) for semiconductor production, and agreed

to jointly construct a purification facility within the premises of Dooam's plant near Seoul. The new facility was completed in January 2015. As a result, the Showa Denko Group's total high-purity N<sub>2</sub>O supply capacity has increased to 1,800t/y, consisting of 1,200t/y in Japan and 600t/y in South Korea. High-purity N<sub>2</sub>O is used for deposition of an insulating oxide film in the process of chemical vapor deposition (CVD) for producing semiconductors. For this application, demand for high-purity N<sub>2</sub>O is growing at the rate of 10–15% a year in Asia. We will continue strengthening our supply system to meet growing demand in the East Asian market.

#### Strengthening high silica zeolite production system

Union Showa K.K. (USKK), a joint venture between SDK and UOP LLC, of the United States, completed a new high silica zeolite production facility within the premises of SDK's Higashinagahara Plant. The new facility started operation in December 2014. High silica zeolite is a kind of synthetic zeolite with increased hydrophobicity, and is used in removing odor and volatile organic compounds as well as adsorbing gases. The material is in tight supply and its demand in Japan and the rest of Asia is expected to grow further, reflecting increased environmental awareness and improvement in living standards. USKK is currently producing hydrophilic synthetic zeolite at its Yokkaichi Plant for such applications as dehydration, drying, refining, and separation. USKK will fully utilize the two plants, aiming to develop and supply new products for such purposes as treatment of contaminated water at Fukushima Daiichi nuclear power plant, decontamination in wide areas, treatment of radioactive nuclides to promote decommissioning of nuclear reactors, and treatment of ordinary industrial waste water.



## Electronics

### Consolidated Business Results (Millions of yen)

	2014	2013	Difference	Rate of change
Sales	138,537	136,548	1,988	1.5%
Operating income	25,770	21,940	3,830	17.5%

The Electronics segment's sales increased 1.5%, to ¥138,537 million. Sales of HD media increased due to steady shipments for PC and other applications. Sales of rare earth magnetic alloys decreased due to lower shipment volumes. Meanwhile, sales of compound semiconductors increased due to higher shipment volumes. Operating income increased 17.5%, to ¥25,770 million, due mainly to the diminishing influence of reductions in the book value of rare earth inventories in the previous year.



## Hard Disks

Sales of HD media increased, reflecting relatively steady HDD shipments for external storage applications and the influence of the termination of support for Windows XP operating system. Operating income increased due to steady shipments and the effect of lower yen.

## Compound Semiconductors

Sales of compound semiconductors increased due to the rise in shipment volumes. Operating income also increased.

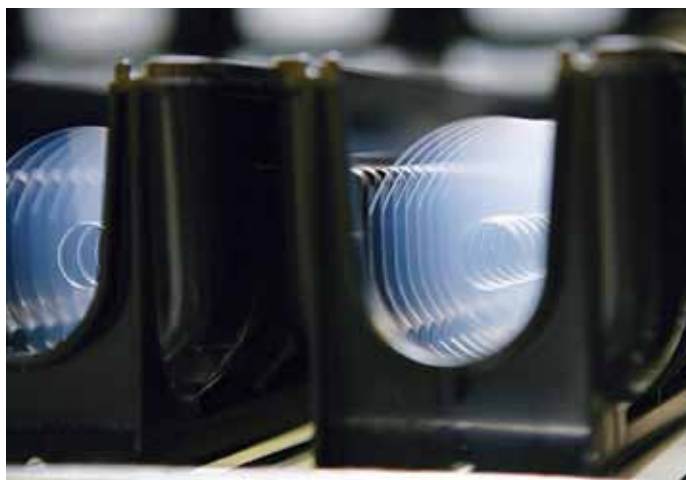
## Rare Earths

Sales of rare earth magnetic alloys decreased due to lower shipment volumes. Operating income increased due to the diminishing influence of reductions in the book value of inventories in the previous year.

## ELECTRONICS TOPICS

### Commercial production of 3.5-inch HD media with the world's highest capacity

Our 3.5-inch HD media (1.1–1.3 terabyte per platter) have been adopted in eight-terabyte HDDs, which represent the highest storage capacity in the world. The HD media are based on the seventh-generation perpendicular magnetic recording (PMR) technology. In 2005, we became the first in the world to produce PMR-technology-based HD media. With the progress in cloud computing and resultant growth in the amount of generated data, HDD demand is expected to increase for use at data centers, in particular. As a crucial HDD component influencing storage capacity, demand for HD media is expected to increase at around 3% a year.



HD media



### Consolidated Business Results (Millions of yen)

	2014	2013	Difference	Rate of change
Sales	67,557	65,919	1,638	2.5%
Operating income	−300	−838	538	—

**The Inorganics segment's sales increased 2.5%, to ¥67,557 million. While oversupply of steel continued in Asia, steel demand recovered gradually in the United States and Japan. Thus, sales of graphite electrodes increased slightly due to higher shipment volumes. Sales of ceramics increased due to higher shipment volumes of abrasives and other ceramic products. The segment recorded an operating loss of ¥300 million, an improvement of ¥538 million.**

## Ceramics

Sales of ceramics increased due to higher shipment volumes of abrasives and other ceramic products. SDK has been shifting its chemical alumina production site from Yokohama to PT. Indonesia Chemical Alumina, a joint venture with ANTAM. Commercial operation at the new plant started in February, 2015.

## Carbons

Despite continued oversupply of steel in Asia, electric steel production in advanced countries, such as the United States and Japan, recovered. Sales of graphite electrodes increased slightly. Operating income also increased.

## INORGANICS TOPICS

### Reorganization of ceramics-related subsidiaries

To strengthen the competitiveness of our ceramics business, we reorganized relevant subsidiaries in Japan as a means to increase efficiency. We started up Showa Denko Ceramics Co., Ltd. in January 2014 as the core company for our ceramics business. In October 2014, Showa Denko Ceramics absorbed Tohoku Metal Chemical Co., Ltd., a producer of glass polishing materials. In January 2015, we started up Showa Fine Ceramics Co., Ltd. by consolidating Nagoya Kenmazai Kogyo Co., Ltd. (a manufacturer and seller of abrasives) and Shiojiri Showa K.K. (a contract manufacturer under SDK's Shiojiri Plant). Under “PEGASUS Phase II,” the ceramics business is classified in the category of “Base (Stable).” The reorganization

# Review of Operations (cont.)

forms the core of our strategy to strengthen the ceramics business. We will make sure to produce the planned effects and expand the business.

## Increased adoption of high-performance photocatalyst *LUMI-RESH™*

High-performance photocatalyst *LUMI-RESH™*, developed by our subsidiary Showa Denko Ceramics Co., Ltd., has been adopted by Taiyo Kogyo Corporation in its indoor membrane material “Hikari-Protextile,” and by Lilycolor Co., Ltd. in its high-performance curtains. Furthermore, Nippon Soda Co., Ltd. successfully developed a paint containing *LUMI-RESH™*. SDK developed and started marketing heat insulation panels coated with the new paint for use in plant growth facilities based on a completely closed system. Application of *LUMI-RESH™* to the surface of heat insulation panels reduces bacteria and viruses in the air, preserving the freshness of vegetables. When a photocatalyst absorbs light, it catalyzes a light-energy-induced reaction that generates active oxygen from moisture and oxygen in the air. Active oxygen inactivates bacteria and viruses adhering to the surface. While conventional photocatalysts react to ultraviolet rays contained in sunlight in large quantity, *LUMI-RESH™* is effective when subjected to low-energy light from indoor fluorescent lights and LEDs. By further improving photocatalyst performance and developing new applications jointly with customers, the Showa Denko Group will aim to contribute to people’s health and safety.



PT. Indonesia Chemical Alumina's new plant



## Consolidated Business Results (Millions of yen)

	2014	2013	Difference	Rate of change
Sales	97,956	90,383	7,573	8.4%
Operating income	2,999	5,845	-2,846	-48.7%

**The Aluminum segment’s sales rose 8.4%, to ¥97,956 million. Sales of rolled products were up due to the rise in shipment volumes of high-purity foils for capacitors, reflecting increased production by capacitor manufacturers for such applications as electric appliances and vehicles. Sales of aluminum specialty components increased due to higher shipment volumes for automotive parts applications. Sales of aluminum cans increased following the acquisition and consolidation of Hanacans, a manufacturer of aluminum beverage cans in Vietnam. Operating income fell 48.7%, to ¥2,999 million, due to the sharp rise in aluminum ingot prices.**

## Rolled Products

Sales of rolled products were up due to the increase in shipment volumes of high-purity aluminum foils for capacitors used in electric appliances and vehicles.

## Specialty Components

Sales of aluminum specialty components increased due mainly to higher shipment volumes for automotive applications. Operating income was maintained at the previous year’s level due to the influence of higher prices of aluminum ingot.

## Aluminum Cans

Sales of aluminum cans increased due to the consolidation of Hanacans, of Vietnam, notwithstanding lower volumes of shipments to Japanese beer manufacturers. Shipment volumes declined in Japan, reflecting the reaction to the consumption tax hike and unusually cool summer. Operating income fell sharply due to the influence of soaring aluminum ingot prices and lower shipment volumes during the unusually cool summer.

## ALUMINUM TOPICS

### Expanded high-purity aluminum foil production capacity in China

As for the business in high-purity aluminum foil (a key material for aluminum electrolytic capacitors), we decided in July 2014 to expand the production capacity at our subsidiary Showa Denko Aluminum (Nantong) Co., Ltd., from 400 tons, to 600 tons per month. The expanded facility began operations in March 2015. Aluminum electrolytic capacitors are used in wide areas, including electric appliances, IT devices, electric vehicles, hybrid cars, and equipment for wind/solar power generation. Demand for aluminum electrolytic capacitors is expected to grow rapidly in China. The Showa Denko Group will aim to ensure stable supply of high-quality, high-purity aluminum foil to serve the growing aluminum electrolytic capacitor market in a timely manner.

### Starting commercial operation of a new aluminum casting plant in Malaysia

Our subsidiary SHOTIC Malaysia Sdn. Bhd. completed the construction of a new aluminum casting plant in Malaysia in November 2014, and started commercial operation of the new plant. This is the first overseas aluminum casting plant for the Showa Denko Group. Together with the existing aluminum forging plant of SHOTIC Singapore Pte., Ltd., the Group has established an integrated aluminum forging/casting system in the ASEAN region. The Group will quickly meet brisk demand from auto makers and automotive parts suppliers operating in the region.

### Consolidation of a Vietnamese aluminum can maker

In May 2014, SDK and its wholly owned subsidiary Showa Aluminum Can Corporation (SAC) completed the procedures for jointly acquiring 91.75% of shares in Hanacans Joint Stock Company (Hanacans), a manufacturer of aluminum beverage cans in Vietnam. Hanacans, with a solid customer base, is the largest aluminum can producer in the northern region of Vietnam. Furthermore, Hanacans will introduce SAC's advanced production technology and quality control system, thereby strengthening its competitive power in the growing Vietnamese market.



Others

#### Consolidated Business Results (Millions of yen)

	2014	2013	Difference	Rate of change
Sales	195,024	176,516	18,508	10.5%
Operating income	-678	-626	-52	—

**The Others segment's sales rose 10.5%, to ¥195,024 million. Sales of lithium ion battery (LIB) materials were maintained at the previous year's level. Shoko Co., Ltd.'s sales increased. BE International Corporation has been consolidated. The segment recorded an operating loss of ¥678 million, down ¥52 million.**

## OTHERS TOPICS

### Completion of the expansion of LIB packaging film production capacity

Our subsidiary Showa Denko Packaging Co., Ltd. completed the expansion of its capacity at its Hikone Plant for producing LIB-packaging aluminum laminated film. Commercial production started in July 2014. The production capacity has tripled versus the 2010 level. The market for LIB-packaging aluminum laminated film continues to grow. Demand for the film is expected to grow for use in large LIBs for automotive applications, in addition to demand for use in small LIBs for smartphones and tablet computers. The Group will aim to ensure stable supply of high-quality materials for the rapidly growing LIB market.

### Increased adoption of proprietary LED chips for plant growth facilities

SHIGYO™ method, developed jointly by SDK and Professor Shigyo, Department of Agriculture, Yamaguchi University, accelerates the growth of plants at LED-based facilities by irradiating light with optimum wavelengths and intensity in consideration of the kind of plant and growing stages. SDK's proprietary LED chips are used for this technology. SHIGYO™ method was adopted in 2014 by Gushiken Co., Ltd., a major bread maker in Okinawa Prefecture, and by Endo Corporation at its facility in Yamagata Prefecture. Aiming to promote plant growth facilities that realize a stable supply of safe food, SDK will continue to provide various types of support to companies considering participation in this business.

# Responsible Care Activities

**Responsible Care is the chemical industry's global voluntary initiative, representing a commitment to work together to continuously improve the health, safety, and environmental performance of chemicals over their entire life cycles, namely, their development, production, distribution, use, final consumption, and disposal.**

Showa Denko has been performing its Responsible Care activities since 1995, when it established action guidelines to implement the program.

The Showa Denko Group's Responsible Care activities are conducted within our 13 business divisions/departments, 15 operation sites, 3 branches, the Business Development Center, and 14 subsidiaries/affiliates, based on voluntary, specific action plans prepared in line with the CSR Committee's basic plan. The following are some examples of our RC activities:

## **Reduction of Greenhouse Gas Emissions and Energy Conservation**

In order to contribute to the prevention of global warming and the preservation of natural resources, we are making our best efforts to conserve energy, including revision and optimization of manufacturing processes, and conversions of facilities.

In 2013, the Showa Denko Group's greenhouse gas (GHG) emissions were equivalent to 2,645kt of CO<sub>2</sub>, up 6% from the previous year. Among that number, our GHG emissions resulting from energy consumption in 2013 were equivalent to 2,484kt of CO<sub>2</sub>, up 7% from the previous year. The main reasons of these changes were the increases in production volumes and worsened GHG emission coefficient of purchased electricity.

We have hydroelectric power plants in our four operation sites, and utilize them as sources of clean energy. Approximately 19% of our total electricity requirements are now met by our hydroelectric power plants, resulting in reduction of 150kt of CO<sub>2</sub> emissions per year, compared to the case in which we assume all the electricity we consume is purchased from outside sources.

## **Contribution to a Recycling-Based Society**

We are committed to effectively using industrial waste and to reducing the volume of its discharge. As a result, the final volume of landfill disposal in 2013 was reduced by 94% from the 1990 base level, due partly to the use of inorganic sludge (in cement, for example). We will continue working to reduce industrial waste.

A large number of employees within the Group are engaged in the recycling of aluminum cans. At our Kawasaki Plant, waste plastic is used to make synthesis gas for ammonia production. Thus, we are contributing toward a recycling-based society.

## **Development of Technologies and Products**

Fully utilizing its core technologies, the Group continues developing new products and technologies to contribute to sustainable growth of society. For example, we are accelerating our developing and marketing efforts in the business field of plant factories. The market size of plant factories is expected to increase because plant factories have many advantages, including realization of stable food production not affected by weather and farming without insecticides due to their insect-damage-free environment. To stimulate the market growth of plant factories, we have developed various materials, components and solution packages for LED-based plant growth facilities, including ultra-bright red LED chips that emit red light of optimum wavelength for accelerating the growth of plants, lighting apparatus utilizing these LED chips, new fast-track plant cultivation method utilizing this LED lighting apparatus (*SHIGYO*<sup>TM</sup> method), aluminum shelves for plant cultivation that realizes an optimum environment for LED-based plant growth facilities, peripheral components for aluminum shelves, CO<sub>2</sub> gas, and heat-insulating walls for clean rooms.

In the field of eco-friendly plastics, we developed and commercialized biodegradable polyester resin *Bionolle*<sup>TM</sup> before the rest of the world. This plastic can be fully decomposed at normal temperature, as time goes by, into water and carbon dioxide by microbial action, and therefore, imposes little damage to the environment. *Bionolle*<sup>TM</sup> and its compound resin *Bionolle Starcla*<sup>TM</sup>, in which bio-derived starches and polylactic acids are mixed with *Bionolle*<sup>TM</sup> to attain less CO<sub>2</sub> emission and environmental impact, have been certified compostable, biodegradable and safe by certification authorities in Japan, Europe, and the United States. We will continue to contribute to global environmental preservation through further development of new applications of these biodegradable plastics, including packaging materials and films for farming.



## Commitment to Chemical Safety

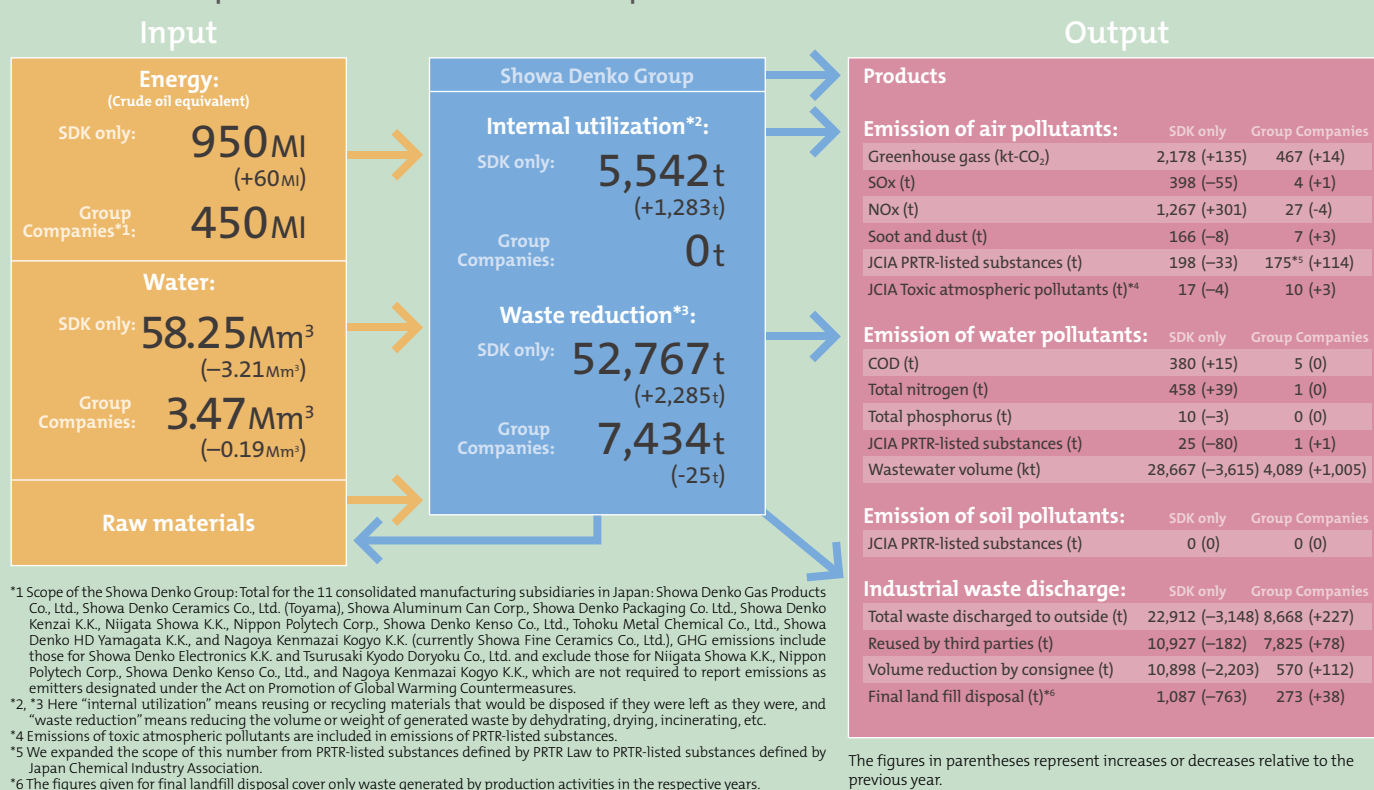
We are taking part in the Japan Initiative of Product Stewardship (JIPS), the new voluntary chemical management initiative by the Japan Chemical Industry Association (JCIA) to enhance risk assessment and risk management with consideration for the supply chain. Through this initiative, the Showa Denko Group is strengthening its chemical product stewardship in various ways, including collection of information and safety assessment at each stage of manufacture, sales, and use/consumption.

We have conducted risk assessments for substances from the higher order of priority in the Group, and we published Safety Summary Sheets of 41 substances on the Global Product Strategy (GPS) portal site of International Council of Chemical Associations (ICCA) in 2013.

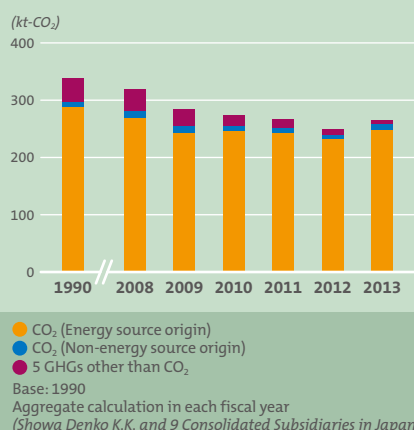
For more information on our Responsible Care activities, please visit our website:

<http://www.sdk.co.jp/english/csr/rc.html>

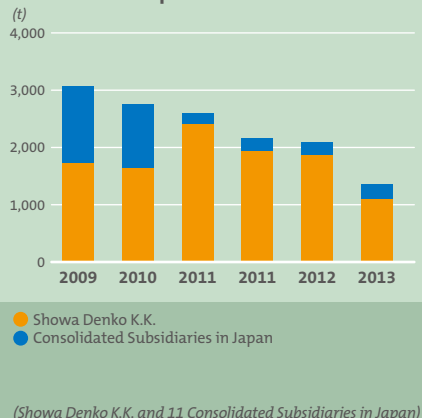
## Showa Denko Group's resource use and environmental impact in 2013



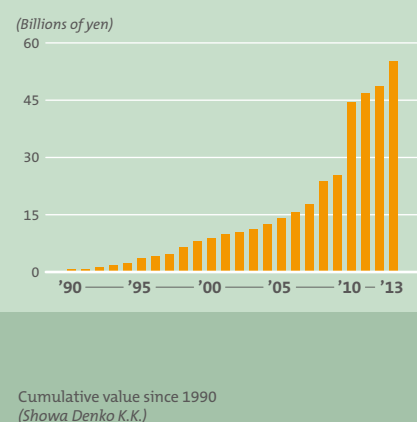
## Trends in Greenhouse Gas Emissions



## Trends in the Final Volume of Landfill Disposal



## Environment-Related Investment



# Corporate Social Responsibility

## Our Code of Conduct and Its Practical Guide

In 2012, we completely revised the “Code of Conduct” for the Showa Denko Group employees established in 1998 and the “Guidelines” enacted in the following year, and put the new version out as “Our Code of Conduct and Its Practical Guide.” We are having this penetrate all employees of the Group through reading sessions implemented during Corporate Ethics Month, which we hold in January every year, and human-rights education programs held in our offices of various districts and subsidiaries. We are encouraging every employee to consider how the Group can support various manufacturing industries by fully utilizing the Group’s competence centering on chemical technologies, and to contribute to the sound growth of society.

## Involvement in Community Activities

In line with its Vision that stresses contribution to society through business activities, the Group is addressing global environmental issues, such as the mitigation of climate change and biodiversity efforts, as important matters for management. The Group, therefore, is making strenuous efforts to reduce GHG emissions and develop technologies pertaining to the environment and energy.

Consequently, for example, SDK’s Oyama Plant received the Merit Award in the 2014 Marronnier Ecofriendly Business Place Awards sponsored by Tochigi Prefecture, which commended Oyama Plant’s activities to reduce CO<sub>2</sub> emissions. Omuta Plant of Showa Aluminum Can Corporation was awarded the 2014 Japan Greenery Research and Development Center’s Chairman’s Prize sponsored by Japan Greenery Research and Development Center, which commended the Plant’s factory greening activities.

In addition, fully utilizing their chemistry-related resources, many of the Group’s operation sites are contributing toward solving relevant local communities’ issues, covering such areas as education, regional development, and welfare.

In particular, many of the Group’s operation sites in Japan and foreign countries are helping the chemical/environmental education of young people. Many operation sites constantly provide classes on demand to elementary schools in neighborhoods.

A considerable number of people have participated in the guided tours to observe the plastic container recycling plant in the Kawasaki Plant. The Head Office participated in the “Summer Chemistry Experiment Event for Children” sponsored by the Japan Chemical Industry Association. As a member of the chemical industry, which has a substantial impact on the natural environment, we believe it is a part of our social responsibility to communicate the importance of environmental protection and science and technology to the younger generation who will lead the future, in addition to reducing environmental impact resulting from our business activities.

We also have positively taken part in many Responsible Care (RC) Community Dialogue Meetings organized by the Japan Chemical Industry Association as part of its RC activities, and exchanged opinions proactively with local residents and administrative staff members.

As members of local communities, our operation sites also have positively taken part in local cleaning activities in order to contribute to the preservation of local environment.

In the area of regional welfare, the Group is supporting local communities through the recycling of aluminum cans. The Group gives donations to welfare facilities, etc., based on the number of aluminum cans recovered mainly by its employees. This aluminum can recycling activity has a more than 40-year history.

For more information on our CSR activities, please visit our website: <http://www.sdk.co.jp/english/csr.html>

### Our Code of Conduct:

As officers and employees of the Showa Denko Group,

1. We will act with integrity as a responsible citizen of the international society.
2. We will provide our customers with satisfaction and safety.
3. We will develop corporate culture that helps every member of the Group to fully display his/her ability.
4. We will meet the expectations of local communities.
5. We will make vigorous efforts to maintain and improve the global environment.



The Head Office participated in “Summer Chemistry Experiment Event for Children”



Local cleaning activities at the seashore of Toyama



The Responsible Care Community Dialogue Meeting in Oita

# CSR Plans and Achievements for 2013

**A** Fully achieved (100%)  
**B** Achieved 80% or more  
**C** Achieved less than 80%

	Plans for 2013	Achievements in 2013	Evaluation	Plans for 2014
<b>Human rights</b>	Ensuring promotion of human rights enlightenment activity	Enhancement of human rights education (training for 0.95 hour/employee, improvement in areas where training time was short in the previous year, participation of six new affiliated companies in the effort)	<b>B</b>	Ensuring promotion of human rights enlightenment activity —Further expansion of human rights education —Provision of training tools and sharing of educational packages —Increased variation in educational contents
<b>Corporate ethics and compliance</b>	Disseminating “Our Code of Conduct and Its Practical Guide” continuously	Promoted the creation of tools in overseas subsidiaries (Chinese version completed)	<b>B</b>	Establishment of compliance and corporate ethics —Discussions in each office using “Our Code of Conduct and Its Practical Guide” —Implementation of employee attitude surveys and examination of issues and measures —Support for putting “Our Code of Conduct and Its Practical Guide” into practice at overseas subsidiaries
		Held discussion in each office as a “Corporate Ethics Month” activity		
		Implemented education and training for new employees		
	Enhancement of consultation about internal reporting (Corporate Ethics Hotline)	Established hotlines at four overseas group companies in China and other countries Support for improving the skills of persons in charge of consultation	<b>A</b>	Expanding the coverage of the internal reporting system (Corporate Ethics Hotline)
<b>Risk management</b>	Executing risk inventory continuously	Executed risk inventory	<b>A</b>	Executing risk inventory continuously
	Continuation of earthquake resistance measures Formulating quakeproof investment plan for 2014–2015	Reviewed and implemented earthquake resistance measures Completed formulation of the earthquake resistance plan for 2014–2015	<b>A</b>	Continuation of earthquake resistance measures Review of the earthquake resistance measures plan for 2015
	Tackling important common risks	Tackled earthquake risks, information security risks, general affairs risks and others	<b>A</b>	Continuously tackling important common risks
<b>Labor practices</b>	Expanding activity scope from “promoting energetic activities of women” to “making best use of diversified human resources” (Diversity Promotion Project)	Maintained the employment rates of handicapped people higher than the legal rate (Showa Denko K.K.: 2.30%, Showa Denko Group: 2.19%) Accepted intellectually or mentally handicapped people as interns	<b>A</b>	Promotion of diversity —Setting of a target number (ratio) of female managers as well as promoting employment and training of female employees to achieve this target —Employment of foreign employees —Environment improvements in order to accept intellectually or mentally handicapped people —Support for affiliated companies that have failed to reach the legal employment rate of handicapped people
		Increased the percentage of female employees (9.6% for Showa Denko K.K. domestic (+3.4% compared with that in 2007) and 10.3% consolidated domestically (+0.6% compared with that in 2007 (as of the end of 2013)) Increased the number of female managers (15 for Showa Denko K.K. domestic as of the end of 2013 (7 as of the end of 2007))	<b>A</b>	
		Continued hiring of new foreign employees	<b>A</b>	
<b>Fair business practice and customer care</b>	Expanding the target scope of CSR procurement	Expanded CSR procurement activities to domestic group companies (self-evaluation performed by the business partners of four group companies) Continued self-evaluation and CSR visits	<b>A</b>	Expanding the target scope of CSR procurement —Self-evaluations and CSR visits targeting the partners of group companies
<b>Information disclosure and IR</b>	Promoting IR	Held a variety of seminars, individual briefing sessions and other events in Japan and abroad	<b>A</b>	Promoting IR
		Timely information disclosure through the website		
<b>Local community and social contribution</b>	Contribution to local communities using internal resources	Implemented classes-on-demand, environmental education, plant tours, intern acceptance and other activities at each plant	<b>A</b>	Contribution to local communities using internal resources —Promotion of next-generation development and contribution activities
<b>Responsible Care activities</b>	Ensuring implementation of RC action plan	Promoted RC activities based on the plan	<b>B</b>	Ensuring implementation of RC action plan

# Corporate Governance

## 1. Basic Concept regarding Corporate Governance

We fully recognize the importance of corporate governance as a means to ensure the soundness, effectiveness, and transparency of management, and to earn the full trust and confidence of the market and society, thereby enhancing corporate value over the long term. The Company is, therefore, taking various measures to strengthen compliance and management supervision, clarify management responsibility, ensure quick decision making and effective execution, and improve disclosure. We also aim to strengthen relations with our stakeholders, including shareholders, customers, suppliers, citizens, and employees. Based on the above, we have clarified our mission in the form of the Company vision stated below, working hard to realize this vision.

### VISION

**We at the Showa Denko Group will provide products and services that are useful and safe and exceed our customers' expectations, thereby enhancing the value of the Group, giving satisfaction to our shareholders, and contributing to the sound growth of international society as a responsible corporate citizen.**

## 2. Situation of the Company's Supervision and Decision-Making Functions

We have adopted the auditor system to enhance the fairness and transparency of management, ensuring efficient management of the Company. To clearly separate management supervision functions from business execution functions, we have introduced the corporate officer system. The top management team, consisting of the President and corporate officers in charge of respective operations, is working to increase the speed of decision making and vitalize operations. Meanwhile, the Company has substantially reduced the number of directors. In addition, we have strengthened the supervision functions by appointing outside directors. At Board meetings held once or twice a month, the Board decides the Company's basic policy and decides, after full deliberation, on matters provided for in the Companies Act and the Company's Articles of Incorporation as well as important matters for the execution of the Company's operations, ensuring a speedy and vigorous decision-making process. We appoint directors from the viewpoint of strengthening corporate governance, aiming to strengthen the Board of Directors' supervision functions and ensure the propriety of the decision-making process. We make sure that corporate officers whose duties are primarily business execution will not concurrently serve as directors, in principle. Furthermore, we have abolished the positions of managing directors and



### Message from Kyohei Takahashi, Chairman of the Board:

The Showa Denko Group considers that strengthening corporate governance is one of the top-priority issues in managing operations. The Company's ordinary general meeting of shareholders, held on March 27, 2015, appointed an additional outside director, increasing the total number of outside directors to three. As a result, outside directors now account for one-third of the nine-member Board of Directors. As for the Board of Auditors, three out of the five members are outside auditors. Both boards have high attendance rates, keenly discussing a wide variety of matters relating to the Group's management. We will continue striving to further strengthen our corporate governance and enhance our value.

A handwritten signature in black ink, likely of Kyohei Takahashi, written in a cursive style.

senior managing directors to put all directors (except for the Chairman, the President, and the Executive Vice President) on an equal footing, while strengthening the supervision by auditors (including outside auditors) and mutual supervision among directors. The term of office of directors has been shortened to one year to ensure a quick response to changes in the business environment and to clarify management responsibility of directors. At the Company's ordinary general meeting of shareholders held on March 27, 2015, nine directors, including three outside directors, were appointed.

## 3. Situation of Business Execution

The Management Committee, which meets once a week in principle and is chaired by the President, deliberates and decides on matters to be referred to the Board of Directors' meetings



and important matters pertaining to overall management of the Company. The decisions are made after deliberations on two occasions. As for investment plans, their risks are examined by task teams before referral to the Management Committee, and their progress is monitored after authorization. The Company's medium-term business plans are decided not only by the Management Committee but also by the participation of all corporate officers.

The Company considers that responsible execution forms the basis of corporate activities. The Company evaluates performances of respective business segments to ensure the effective implementation of the performance-based evaluation system. The Company has Security Export Control and Safety Measures committees under the CSR Committee chaired by the President. The Company also has Responsible Care, Risk Management, Human Rights/Corporate Ethics, and IR promotion councils. These committees and councils investigate, study, and deliberate on specific matters important for the execution of businesses.

#### 4. Situation of Auditing Functions

The Company's Board of Auditors consists of five auditors, including three outside auditors. The auditors attend the Board of Directors' meetings and other important internal meetings, offering opinions as necessary. They audit the execution of operations through such means as field investigations, hearing sessions, and perusal of important documents, making proposals and providing advice and recommendations to ensure the sound management of the Company. They are working to strengthen the consolidated auditing system in cooperation with auditors of major associated companies.

We have a department for internal audit reporting directly to the President. The Internal Audit Department investigates the overall execution of business, checking for accuracy, propriety, and efficiency. It also investigates the management policies, business plans, and their execution, checking for consistency and soundness. The results of internal auditing are reported to auditors to ensure consistency with audits by auditors.

As for matters relating to the environment and safety, respective divisions in charge conduct Responsible Care audits. KPMG AZSA LLC conducts auditing of the Company based on an auditing contract and an annual plan agreed upon with auditors, and provides audit results to auditors. The accounting corporation and auditors exchange information and views from time to time to strengthen their cooperation.

#### 5. Compliance and Risk Management

The Company's Board of Directors has decided to strengthen compliance and promote risk management as key components of its internal control system. The Board will continue to work on these issues.

##### **Compliance**

The Company is working to strengthen compliance through the Code of Conduct for its employees and the Human Rights/Corporate Ethics Promotion Council, which is under the CSR Committee chaired by the President. Every January, we observe Corporate Ethics Month to renew our awareness. Furthermore, compliance is strengthened through various seminars provided by staff sections and activities organized by respective business sectors. In the event of transgressions, the Company takes measures to prevent recurrence and takes disciplinary actions. The performance evaluation of relevant sectors is to reflect such transgressions. To prevent a transgression or detect it early, we have established an internal check system and channels of communication for reporting the matter.

##### **Risk management**

The Management Committee examines important matters from various angles. In particular, investment plans are examined carefully from such viewpoints as strategic importance and risk management. Furthermore, their progress is monitored and their results are reviewed. Respective business sectors analyze and evaluate their own business risks. The Risk Management Promotion Council, which is chaired by the Company's Chief Risk Management Officer, is under the CSR Committee chaired by the President. The Risk Management Promotion Council decides the Company's basic risk management policy, regularly evaluates overall risks, works out measures regarding high-risk matters, and checks how the measures are implemented by relevant business sectors.

As to individual risks pertaining to environmental protection, industrial safety, disaster prevention, chemical substances, product quality, intellectual property, fair trade, export control, and legal matters, relevant staff sections establish in-house rules and manuals, provide seminars, and manage risks through the review and authorization of proposals from business sectors. In the event of an emergency, the Company will set up crisis headquarters to take swift action and minimize damage.

## 6. Reaction Policy on Large-Scale Purchases of the Company's Stock Certificates, etc.

The Company believes that its shareholders should be determined through the free movement of its shares in the market. Although proposals regarding the large-scale purchases of the Company's shares are made by specific persons, the decision whether to sell the Company's shares in response to such a proposal shall eventually be made based on the opinion of the shareholders, which is reached after being given the sufficient information necessary for making an appropriate decision and sufficient time for consideration.

In light of the basic policy stated above, the Company has renewed its efforts to prevent inappropriate persons from controlling its financial and business policy decisions. A renewed "Reaction Policy on Large-scale Purchases of the Company's Stock Certificates (Takeover Defense)" was approved at the Company's ordinary general meeting of shareholders held on March 27, 2014. (For details, please refer to the Company's press release dated February 13, 2014.)

## 7. Other

Remuneration, etc., to directors, auditors and auditing corporation (for the period from January 1 through December 31, 2014) is as follows;

### Remuneration, etc., to directors and auditors

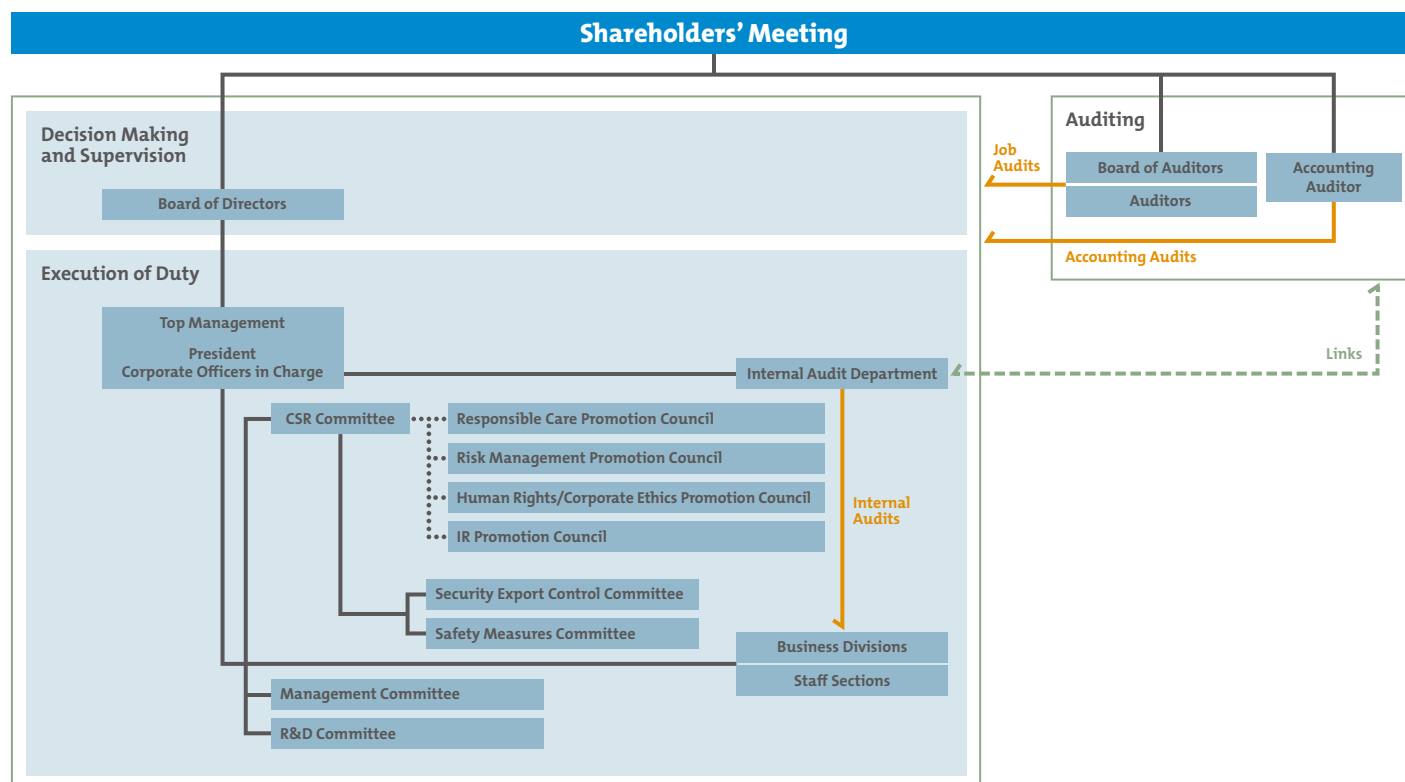
	Number of applicable persons	Paid amount
Directors (excluding outside directors)	9	¥278 million
Auditors (excluding outside auditors)	2	¥54 million
Outside directors and auditors	5	¥55 million
Total	16	¥388 million

### Remuneration to the auditing corporation

	Paid amount
Name of accounting auditor: KPMG AZSA LLC Remuneration for the issuance of auditing certification based on the audit contract	¥153 million

## 8. Personal/Financial Relations and Interests between the Company and Outside Directors/Auditors

The Company has three outside directors and three outside auditors. None of them has special interests in the Company. An outline of the Company's corporate governance system is as shown below.



## Board of Directors

**Director, Chairman of the Board**  
Kyohei Takahashi

**Representative Director, President**  
Hideo Ichikawa

**Representative Director,  
Executive Vice President**  
Shinji Sakai

### Directors

Akira Koinuma

Masaru Amano

Saburo Muto

Tomofumi Akiyama (*Outside Director*)

Akiyoshi Morita (*Outside Director*)

Masaharu Oshima (*Outside Director*)

## Auditors

**Standing Statutory Auditors**

Ichiro Nomura

Akira Sakamoto

### Auditors

Hiroyuki Tezuka (*Outside Auditor*)

Yukio Obara (*Outside Auditor*)

Kiyomi Saito (*Outside Auditor*)



(Front row, left to right) Kyohei Takahashi, Hideo Ichikawa, Shinji Sakai  
(Back row, left to right) Masaharu Oshima, Tomofumi Akiyama, Masaru Amano, Akira Koinuma, Saburo Muto, Akiyoshi Morita

## Corporate Officers and Senior Corporate Fellows

### Chief Executive Officer

Hideo Ichikawa

### Executive Vice President

Shinji Sakai

*Officer in charge of Ceramics & Carbons divisions, Corporate R&D and Corporate Strategy departments, and plants (Yokohama, Shiojiri, and Omachi)*

### Senior Managing Corporate Officer

Akira Koinuma

*Chief Technology Officer; Officer in charge of Production Technology, Energy & Electricity, SPS Innovation, and CSR departments; Chairman, Safety Measures Committee*

### Managing Corporate Officers

Masaru Amano

*Chief Risk Management Officer; Officer in charge of Internal Audit, Legal & Intellectual Property, General Affairs & Human Resources, and Purchasing & SCM departments; Chairman, Security Export Control Committee*

Saburo Muto

*Chief Financial Officer; Officer in charge of Finance & Accounting and Information Systems departments*

Jiro Ishikawa

*General Manager, HD Division*

### Corporate Officers

Robert C. Whitten

*President and CEO, Showa Denko Carbon, Inc.; Assistant to President, in charge of special assignment matters (in charge of Global Marketing)*

Yoshiyuki Nishimura

*Officer in charge of Electronics Materials divisions, Advanced Battery Materials Department, and Chichibu Plant*

Atushi Mizutani

*General Representative in China; General Manager, China Office, Corporate Strategy Department; President of Showa Denko (Shanghai) Co., Ltd.*

Keiichi Kamiguchi

*Officer in charge of Industrial Gases and Basic Chemicals divisions, and plants (Kawasaki and Higashinagahara)*

Kanji Takasaki

*Officer in charge of Aluminum Rolled Products, Aluminum Specialty Components, and Aluminum Can divisions, and plants (Oyama and Kitakata)*

Hitoshi Tanaka

*General Manager, Carbons Division*

Tatsuharu Arai

*General Manager, Petrochemicals Division and Olefins Department; Officer in charge of Oita Complex*

Nobuhiko Kawamura

*General Manager, Electronics Materials Division*

Jun Tanaka

*General Manager, Advanced Battery Materials Department*

Kohei Morikawa

*General Manager, Electronic Chemicals Division; Officer in charge of Functional Chemicals Division, and plants (Tokuyama, Isesaki, and Tatsuno)*

Junichi Inaizumi

*General Manager, Aluminum Specialty Components Division*

Youichi Takeuchi

*Oita Complex Representative*

Takayuki Sato

*General Manager, Business Development Center*

Motohiro Takeuchi

*General Manager, Ceramics Division*

Taichi Nagai

*Plant Manager, Kawasaki Plant*

### Senior Corporate Fellows

Takashi Nakayama

*President, Nippon Polytech Corporation; Assistant to President in charge of new business creation relating to chemicals*

Kazumi Naito

*General Manager, Naito Research Laboratory, Institute for Advanced and Core Technology, Business Development Center*

Hiroshi Sakai

*General Manager, Technology Development Control Department, HD Division*

# Consolidated Six-year Summary

## Showa Denko K.K. and Consolidated Subsidiaries

For the years ended December 31, 2009 through 2014

	Millions of yen						Thousands of U.S. dollars (Note 1)
	2009	2010	2011	2012	2013	2014	2014
<b>For the year</b>							
Net sales	¥678,204	¥797,189	¥854,158	¥739,811	¥848,071	¥876,580	\$7,271,503
Petrochemicals (Note 2)	235,999	199,590	250,396	190,939	286,732	281,400	2,334,302
Chemicals (Note 2)	91,887	133,578	130,203	127,376	130,656	139,064	1,153,583
Electronics (Note 2)	127,807	147,988	165,011	163,306	136,548	138,537	1,149,204
Inorganics (Note 2)	53,711	77,958	77,564	65,573	65,919	67,557	560,409
Aluminum (Note 2)	168,799	130,084	124,280	92,206	90,383	97,956	812,577
Others (Note 2)	—	154,084	150,583	135,280	176,516	195,024	1,617,785
Adjustments (Note 2)	—	(46,093)	(43,879)	(34,870)	(38,684)	(42,959)	(356,357)
Operating income (loss)	(4,983)	38,723	47,357	28,108	25,953	20,915	173,494
Net income (loss)	(37,981)	12,706	16,980	9,368	9,065	3,500	29,036
R&D expenditures	20,743	20,670	21,597	20,633	20,435	20,362	168,908
Capital expenditures	38,666	58,035	38,794	42,503	44,370	47,318	392,520
Depreciation and amortization (Note 2)	54,358	50,678	49,413	46,232	39,779	40,673	337,399
<b>At year-end</b>							
Total assets	958,303	924,484	941,303	933,162	985,771	1,011,083	8,387,249
Total net assets	286,722	284,965	295,745	314,966	345,811	320,504	2,658,683
							U.S. dollars (Note 1)
							Yen
<b>Per share</b>							
Net income (loss)—primary (Note 3)	¥(29.44)	¥ 8.49	¥ 11.35	¥ 6.26	¥ 6.06	¥ 2.38	\$0.02
Net income—fully diluted (Note 3)	—	—	11.20	—	—	—	—
Net assets	163.11	161.47	168.33	182.24	201.27	210.16	1.74
Cash dividends (applicable to the period)	3.00	3.00	3.00	3.00	3.00	3.00	0.02
<b>Number of employees at year-end</b>							
	11,564	11,597	11,542	9,890	10,234	10,577	

Notes: 1. Yen amounts have been translated into U.S. dollars, for convenience only, at the rate of ¥120.55 to US\$1.00, the approximate rate of exchange at December 31, 2014.

2. Effective from the year ended December 31, 2011, the Companies have applied "Accounting Standard for Disclosures about Segments of an Enterprise and Related Information" (Accounting Standards Board of Japan (ASBJ) Statement No. 17, issued on June 30, 2010) and "Guidance on the Accounting Standard for Disclosures about Segments of an Enterprise and Related Information" (ASBJ Guidance No. 20, issued on March 21, 2008). The segment information for the year ended December 31, 2010, which is restated under the accounting standard, is disclosed for comparison purposes.

3. Net income per share has been computed based on the average number of shares of common stock outstanding during the respective fiscal year. Fully diluted net income per share additionally assumes the conversion of the convertible bonds.

Diluted net income per share for 2014 was not disclosed because there was no dilutive stock at December 31, 2014.

Diluted net income per share for 2013, 2012 and 2010 were not disclosed because the Company had no securities with dilutive effects.

Although the potential for stock dilution exists, diluted net income per share for 2009 was not disclosed because the Company posted a net loss.



# Management's Discussion and Analysis

## Results of Operations

Consolidated net sales in 2014 totaled ¥876,580 million (US\$7,272 million), an increase of ¥28,509 million, or 3.4%, from the previous year due mainly to higher sales reflecting the increase in shipment volumes in five segments other than the Petrochemicals segment, whose sales decreased due to the periodic shutdown maintenance of our ethylene plant.

The cost of sales increased ¥28,832 million, or 3.9%, to ¥767,849 million (US\$6,370 million), reflecting the increase in net sales.

Selling, general and administrative expenses increased ¥4,715 million, or 5.7%, to ¥87,816 million (US\$728 million).

We recorded operating income of ¥20,915 million (US\$174 million), down ¥5,039 million, or 19.4%, due to the decrease in operating income in the Petrochemicals segment in consequence of periodic large-scale shutdown maintenance and the sharp drop in naphtha price at the end of the year, and due also to the decrease in operating income in the Aluminum segment reflecting the rise in prices of aluminum ingots.

R&D expenditures decreased ¥73 million, to ¥20,362 million (US\$169 million).

## Information by Business Segment

A breakdown of net sales and operating income by business segment is as follows.

### Petrochemicals

Production of ethylene and propylene decreased from the previous year due to the periodic large-scale shutdown maintenance implemented from March to April, which is conducted once every four years. Sales of olefins decreased due to lower shipment volumes reflecting this shutdown maintenance. Sales of organic chemicals increased due to higher shipment volumes of ethyl acetate and vinyl acetate.

As a result, the Petrochemicals segment's sales decreased ¥5,332 million, or 1.9%, to ¥281,400 million (US\$2,334 million). The segment recorded an operating loss of ¥4,930 million (US\$41 million), down ¥9,328 million from the previous year, due to the periodic shutdown maintenance and the sharp drop in naphtha price at the end of the year.

### Chemicals

Sales of basic chemicals increased from the previous year due to the improvement in acrylonitrile market, and higher export volumes of chloroprene rubber to the US market, in addition to the effect of a weak yen. Sales of electronic chemicals increased due to higher shipment volumes of specialty gases for semiconductor processing to the East Asian market. Sales of functional chemicals slightly increased.

As a result, the Chemicals segment's sales increased ¥8,408 million, or 6.4%, to ¥139,064 million (US\$1,154 million). The segment recorded an operating income of ¥5,460 million (US\$45 million), up ¥2,901 million from the previous year.

### Electronics

Sales of HD media increased due to steady shipment volumes for PCs and other applications. Sales of rare earth magnetic alloys decreased due to lower shipment volumes. Sales of compound semiconductors increased due to higher shipment volumes.

As a result, the Electronics segment's sales increased ¥1,988 million, or 1.5%, to ¥138,537 million (US\$1,149 million). Operating income of the segment increased 17.5%, to ¥25,770 million (US\$214 million) due to the decrease in influence of the depreciation of rare earth inventory that accrued in 2013.

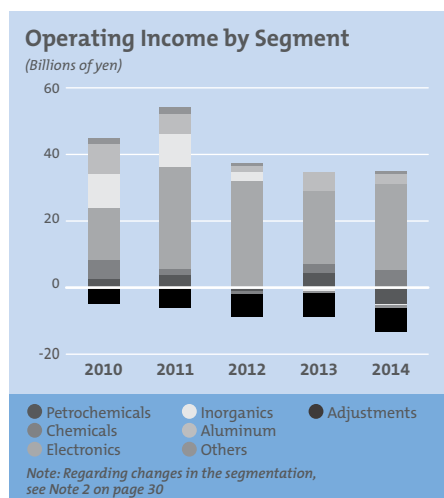
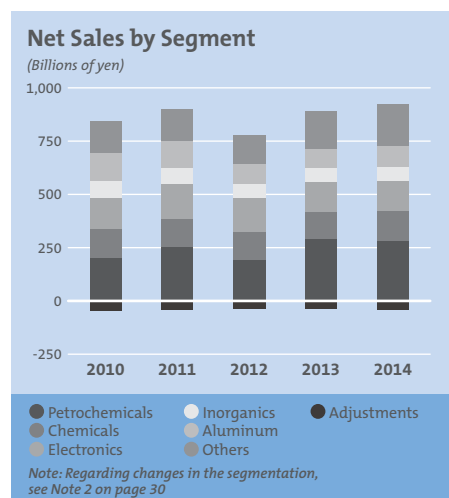
### Inorganics

Sales of graphite electrodes slightly increased due to higher shipment volumes, reflecting gradual recovery of demand for steel in developed countries including the United States and Japan, notwithstanding continued oversupply situation in the steel industry of Asia. Sales of ceramics increased due partly to higher shipment volumes of abrasives.

As a result, the Inorganics segment's sales increased ¥1,638 million, or 2.5%, to ¥67,557 million (US\$560 million). The segment recorded operating loss of ¥300 million (US\$2 million), an improvement of ¥538 million from the previous year.

### Aluminum

Sales of rolled products increased due partly to higher shipment volumes of high-purity foil for aluminum electrolytic capacitors reflecting the



capacitor industry's increased production of parts for use in home electric appliances and cars. Sales of aluminum specialty components increased due partly to higher shipment volumes of components for automotive applications. Sales of aluminum cans increased due to consolidation of the newly acquired subsidiary, Hanacans Joint Stock Company, of Vietnam.

As a result, the Aluminum segment's sales increased ¥7,573 million, or 8.4%, to ¥97,956 million (US\$813 million). However, operating income of the segment decreased ¥2,846, to ¥2,999 million (US\$25 million) due partly to the influence of sharp increases in prices of aluminum ingots.

### Others

Sales of lithium ion battery (LIB) materials were maintained at the level of the previous year. Shoko Co., Ltd.'s sales increased, reflecting higher shipment volumes in overseas businesses. SDK's consolidation of BE International Corporation, a subsidiary of Shoko Co., Ltd., also increased the sales of the segment.

As a result, the Others segment's sales increased ¥18,508 million, or 10.5%, to ¥195,024 million (US\$1,618 million). However, the segment recorded an operating loss of ¥678 million (US\$6 million), down ¥52 million from the previous year.

## Information by Geographic Area

### Sales in Japan

Sales of the Petrochemicals segment decreased due to the periodic large-scale shutdown maintenance conducted once every four years. Sales of the Chemicals segment increased due to the improvement in acrylonitrile market. Sales of the Electronics segment increased, reflecting the steady demand for HD media for PCs. Sales of the Inorganics segment increased due to higher shipment volumes of ceramics. Sales of the Aluminum segment increased due partly to higher shipment volumes of high-purity foil for aluminum electrolytic capacitors. Sales of the Others segment increased due to SDK's consolidation of BE International Corporation.

As a result, consolidated sales from operations in Japan increased ¥23,607 million, or 4.5%, to ¥549,910 million (US\$4,562 million).

### Sales in China

Sales of rolled aluminum products increased due to SDK's consolidation of Showa Denko Aluminum (Nantong) Co., Ltd. However, sales of the

Petrochemicals segment decreased due to lower shipment volumes of products including ethylene, reflecting the periodic large-scale shutdown maintenance conducted once every four years.

As a result, consolidated sales from operations in China decreased ¥8,133 million, or 7.7%, to ¥97,525 million (US\$809 million).

### Sales in Asia (Excluding Japan and China)

Sales of the Chemicals segment increased due to higher shipment volumes of high-purity semiconductor-processing gases in electronic chemicals business. Sales of the Aluminum segment increased due to the consolidation of Hanacans Joint Stock Company, a can manufacturer of Vietnam.

As a result, consolidated sales from operations in Asia (excluding Japan and China) increased ¥11,570 million, or 6.6%, to ¥187,073 million (US\$1,552 million).

### Sales in the Rest of the World

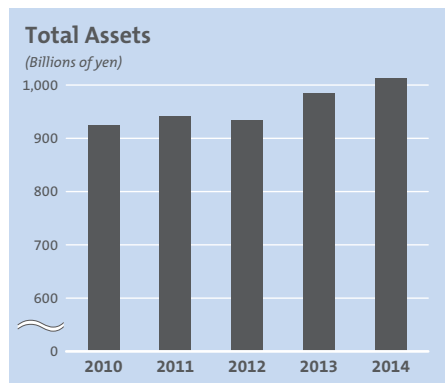
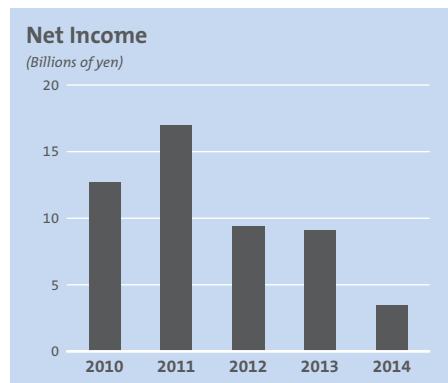
Sales of the Inorganics segment increased due to higher shipment volumes of graphite electrodes, reflecting the recovery of demand for steel in the United States. Sales of the Chemicals segment increased due to higher shipment volumes of chloroprene rubber in basic chemicals business.

As a result, consolidated sales from operations in the rest of the world increased ¥1,466 million, or 3.6%, to ¥42,073 million (US\$349 million).

## Other Income (Expenses) and Net Income

The gap between interest expenses and interest and dividends income decreased ¥1,996 million, to expenses of ¥831 million (US\$7 million), due partly to SDK's receipt of a dividend from Nippon Asahan Aluminum Co., Ltd., to which we had made a contribution, as a result of that company's withdrawal from an aluminum smelting joint venture of Indonesia. We recorded a gain in the equity in earnings of unconsolidated subsidiaries and affiliates to which the method is applied in the amount of ¥1,212 million (US\$10 million), an improvement of ¥1,476 million, due partly to an improvement in business results of affiliates in synthetic-resin-related operations. Foreign exchange gains improved ¥2,266 million, to ¥4,431 million (US\$37 million) due to continuous weakening of yen throughout the year.

We recorded a loss of ¥4,140 million (US\$34 million), net, on retirement and sales of noncurrent assets, an increase of ¥2,762 million, due partly to the Inorganics segment's termination of alumina production in Yokohama Plant. We also recorded a loss of ¥3,747 million (US\$31 million) for the impairment loss, an increase of ¥2,390



million due partly to the withdrawal from the ethyl acetate business in Indonesia and reorganization of ceramics related subsidiaries in Japan.

Loss on valuation of investment securities increased ¥3,567 million, to ¥4,032 million (US\$33 million) due to recognition and record of valuation loss on our investment to an aluminum smelting company of Venezuela. Gain on sales of investment securities decreased ¥2,157 million, to ¥2,986 million (US\$25 million).

Overall, the total of other income (expenses), net, i.e., the total of non-operating income (expenses) and extraordinary income (expenses), net, deteriorated ¥9,031 million, to a loss of ¥10,951 million (US\$91 million).

As a result, the Company posted income before taxes and minority interests of ¥9,964 million (US\$83 million), down ¥14,069 million from the previous year. The Company recorded net income of ¥3,500 million (US\$29 million), down ¥5,564 million from the previous year.

## Financial Position

### Total Assets

Total assets increased ¥25,312 million from the end of the previous year, to ¥1,011,083 million (US\$8,387 million), due partly to the additional consolidation of subsidiaries including Showa Denko Aluminum (Nantong) Co., Ltd. and appreciation of overseas subsidiaries' assets in terms of Japanese yen derived from depreciation of the yen. Cash and deposits decreased ¥1,410 million, to ¥66,840 million (US\$554 million).

Inventories increased ¥3,443 million, to ¥123,600 million (US\$1,025 million), reflecting the additional consolidation of subsidiaries and appreciation of overseas subsidiaries' assets in terms of Japanese yen derived from depreciation of the yen. Net property, plant and equipment increased ¥19,569 million, to ¥513,656 million (US\$4,261 million), due partly to the increase in the amount of newly acquired plants and equipment far above the amount of depreciation of existing plants in consequence of capacity expansion work in Showa Denko Carbon, Inc., of the United States, and the additional consolidation of subsidiaries including Hanacans Joint Stock Company.

Total investments and other assets decreased ¥2,078 million, to ¥115,007 million (US\$954 million), due partly to the recognition and record of valuation loss on our investment to an aluminum smelting company of Venezuela.

### Liabilities

Interest bearing debt increased ¥29,438 million, to ¥383,124 million (US\$3,178 million), due partly to the refinancing of existing Hybrid

Securities by subordinated loan and additional consolidation of subsidiaries. Total liabilities increased ¥50,618 million, to ¥690,579 million (US\$5,729 million), due to the increase in the interest bearing debt and notes and accounts payable-trade.

### Net Assets

Net assets decreased ¥25,306 million from the end of the previous year, to ¥320,504 million (US\$2,659 million), due partly to the repurchase of own shares, and decrease in minority interests resulting from the repurchase and cancellation of Euroyen perpetual preferred convertible securities issued by SD Preferred Capital Limited, SDK's wholly-owned special purpose company.

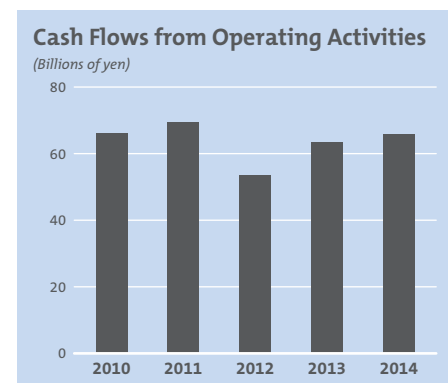
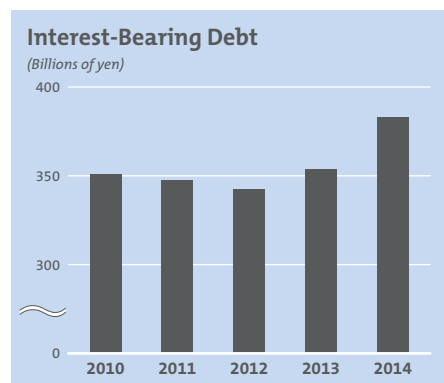
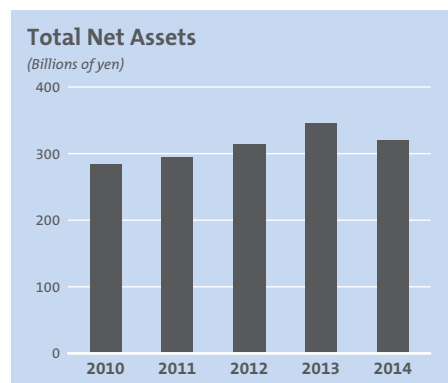
### Capital Expenditures

Capital expenditures increased ¥2,948 million, to ¥47,318 million (US\$393 million), due to completion of establishment of production facilities for aluminum cans to contain coffee beverages, establishment of new ethyl acetate plant, increase in production capacity of LIB packaging laminates, increase in production capacity of SiC epitaxial wafers for power devices, and reconstruction of distribution center for liquefied ammonia in the Tohoku Region (northeast region of Japan hit by earthquake and tsunami in 2011). We also implemented construction works for various purposes including expansion of production capacity of graphite electrodes, reinforcement of other production facilities, efficiency improvement, maintenance of production facilities, and environmental preservation.

### Cash Flows

Net cash provided by operating activities increased ¥2,431 million from the previous year, to ¥65,996 million (US\$547 million), due partly to an increase in dividends income, despite the decrease in operating income. Net cash used in investing activities increased ¥487 million, to ¥47,225 million (US\$ 392 million), due partly to the increase in purchase of investments in subsidiaries resulting in change in scope of consolidation. Cash flows from financing activities ended up in net payment of ¥25,024 million (US\$208 million), an increase of ¥18,219 million in payment, as a result of the purchase of preferred securities and the repurchase of own shares, despite the rise in interest-bearing debt.

As a result, taking into the effects of exchange rate fluctuations into account, cash and cash equivalents at the end of 2014 decreased ¥1,660 million, to ¥66,515 million (US\$552 million).



# Consolidated Balance Sheets

## Showa Denko K.K. and Consolidated Subsidiaries

At December 31, 2014 and 2013

	Millions of yen		Thousands of U.S. dollars (Note 5)
	2014	2013	2014
<b>ASSETS</b>			
<b>Current assets</b>			
Cash and deposits (Notes 6 and 7)	¥ 66,840	¥ 68,250	\$ 554,455
Notes and accounts receivable (Notes 7 and 10)	170,829	169,390	1,417,080
Allowance for doubtful accounts	(1,509)	(256)	(12,516)
Inventories	123,600	120,156	1,025,300
Deferred tax assets (Note 13)	4,244	4,810	35,204
Other current assets	16,435	12,249	136,336
Total current assets	380,439	374,599	3,155,859
<b>Property, plant and equipment</b> (Note 11)			
Land (Note 19)	254,116	254,593	2,107,969
Buildings and structures	267,817	258,341	2,221,625
Machinery, equipment and vehicles	769,620	728,051	6,384,238
Construction in progress	46,277	35,688	383,886
	1,337,830	1,276,673	11,097,718
Less: Accumulated depreciation	(824,173)	(782,586)	(6,836,777)
Net property, plant and equipment	513,656	494,087	4,260,941
<b>Investments and other assets</b>			
Investment securities (Notes 7, 8 and 11)	76,113	78,688	631,378
Long-term loans	771	1,201	6,395
Net defined benefit asset (Notes 3 and 12)	20	—	169
Deferred tax assets (Note 13)	15,563	15,889	129,102
Other	22,953	21,839	190,398
Allowance for doubtful accounts	(412)	(531)	(3,421)
Total investments and other assets	115,007	117,085	954,022
<b>Goodwill</b> (Note 23)	1,980	—	16,427
<b>Total assets</b>	<b>¥1,011,083</b>	<b>¥ 985,771</b>	<b>\$ 8,387,249</b>

See notes to financial statements.



LIABILITIES AND NET ASSETS	Millions of yen		Thousands of U.S. dollars (Note 5)
	2014	2013	2014
<b>Current liabilities</b>			
Short-term debt (Notes 7 and 11)	¥ 76,519	¥ 96,182	\$ 634,751
Current portion of long-term debt (Notes 7 and 11)	80,486	41,694	667,659
Notes and accounts payable (Notes 7 and 10)	183,427	167,287	1,521,586
Income taxes payable	2,435	2,202	20,199
Provision for repairs	61	3,512	506
Provision for bonuses	2,135	2,251	17,714
Provision for business structure improvement	769	296	6,382
Provision for Niigata Minamata Disease	137	149	1,132
Other current liabilities (Note 13)	34,811	33,373	288,769
Total current liabilities	380,781	346,945	3,158,698
<b>Noncurrent liabilities</b>			
Long-term debt less current portion (Notes 7 and 11)	226,119	215,811	1,875,725
Deferred tax liabilities (Note 13)	3,453	3,305	28,640
Provision for retirement benefits (Note 12)	—	20,310	—
Provision for repairs	633	43	5,254
Net defined benefit liability (Notes 3 and 12)	22,115	—	183,453
Deferred tax liabilities for land revaluation (Note 19)	39,841	39,849	330,492
Other noncurrent liabilities (Notes 7 and 23)	17,637	13,698	146,305
Total noncurrent liabilities	309,798	293,016	2,569,868
<b>Contingent liabilities</b> (Note 17)			
<b>Net assets</b> (Note 18)			
<b>Shareholders' equity</b>			
Capital stock			
Authorized, 3,300,000,000 shares			
Issued, 2014—1,497,112,926 shares	140,564	—	1,166,018
Issued, 2013—1,497,112,926 shares	—	140,564	—
Capital surplus	62,221	62,221	516,143
Retained earnings	57,467	58,414	476,708
Less: Treasury stock at cost, 2014—68,831,258 shares	(10,153)	—	(84,221)
Less: Treasury stock at cost, 2013—539,728 shares	—	(149)	—
Total shareholders' equity	250,099	261,050	2,074,647
<b>Accumulated other comprehensive income</b>			
Valuation difference on available-for-sale securities	6,783	5,850	56,269
Deferred gains or losses on hedges	1,262	105	10,470
Revaluation reserve for land (Note 19)	27,908	27,923	231,508
Foreign currency translation adjustments	19,018	6,284	157,758
Remeasurements of defined benefit plans (Notes 3 and 12)	(4,899)	—	(40,639)
Total accumulated other comprehensive income	50,072	40,161	415,367
<b>Minority interests</b>	20,333	44,599	168,669
Total net assets	320,504	345,811	2,658,683
Total liabilities and net assets	¥1,011,083	¥985,771	\$8,387,249

# Consolidated Statements of Income

## Showa Denko K.K. and Consolidated Subsidiaries

For the years ended December 31, 2014 and 2013

	Millions of yen		Thousands of U.S. dollars (Note 5)
	2014	2013	2014
<b>Net sales</b>	<b>¥876,580</b>	¥848,071	<b>\$7,271,503</b>
<b>Cost of sales</b> (Note 21)	<b>767,849</b>	739,017	<b>6,369,547</b>
Gross profit	<b>108,731</b>	109,054	<b>901,957</b>
<b>Selling, general and administrative expenses</b> (Notes 20 and 21)	<b>87,816</b>	83,101	<b>728,463</b>
Operating income	<b>20,915</b>	25,953	<b>173,494</b>
<b>Other income (expenses)</b>			
Interest and dividends income	<b>3,715</b>	1,300	<b>30,819</b>
Equity in earnings of unconsolidated subsidiaries and affiliates	<b>1,212</b>	(264)	<b>10,055</b>
Gain on sales of investment securities, net	<b>2,985</b>	5,051	<b>24,761</b>
Loss on valuation of investment securities	<b>(4,032)</b>	(465)	<b>(33,449)</b>
Foreign exchange gains	<b>4,431</b>	2,165	<b>36,758</b>
Rent income on noncurrent assets	<b>1,628</b>	1,479	<b>13,504</b>
Gain on sales of noncurrent assets, net	<b>28</b>	66	<b>233</b>
Interest expenses	<b>(4,546)</b>	(4,126)	<b>(37,711)</b>
Loss on retirement of noncurrent assets	<b>(4,168)</b>	(1,444)	<b>(34,575)</b>
Impairment loss (Note 14)	<b>(3,747)</b>	(1,357)	<b>(31,085)</b>
Loss on mothballing of operation	<b>(2,947)</b>	(1,852)	<b>(24,449)</b>
Compensation for cancellation of contracts	<b>—</b>	756	<b>—</b>
Other, net	<b>(5,509)</b>	(3,229)	<b>(45,701)</b>
Total	<b>(10,951)</b>	(1,920)	<b>(90,839)</b>
<b>Income before income taxes and minority interests</b>	<b>9,964</b>	24,033	<b>82,655</b>
<b>Income taxes</b> (Note 13)			
Current	<b>3,865</b>	3,519	<b>32,065</b>
Deferred	<b>2,959</b>	10,241	<b>24,543</b>
<b>Income before minority interests</b>	<b>3,140</b>	10,274	<b>26,047</b>
<b>Minority interests in income (loss)</b>	<b>(360)</b>	1,209	<b>(2,988)</b>
Net income	<b>¥3,500</b>	¥ 9,065	<b>\$29,036</b>

	Yen	U.S. dollars (Note 5)
<b>Per share amounts</b>		
Net income—primary	<b>¥2.38</b>	¥6.06
Net income—fully diluted	<b>—</b>	—
Cash dividends (applicable to the period)	<b>3.00</b>	3.00

Note: Net income per share has been computed based on the average number of shares of common stock outstanding during the respective fiscal year. Fully diluted net income per share additionally assumes the conversion of the convertible bonds.

Diluted net income per share for 2014 was not disclosed because there was no dilutive stock at December 31, 2014.

Diluted net income per share for 2013 was not disclosed because the Company had no securities with dilutive effects.

See notes to financial statements.

# Consolidated Statements of Comprehensive Income

## Showa Denko K.K. and Consolidated Subsidiaries

For the years ended December 31, 2014 and 2013

	Millions of yen		Thousands of U.S. dollars (Note 5)
	2014	2013	2014
<b>Income before minority interests</b>	<b>¥ 3,140</b>	¥10,274	<b>\$ 26,047</b>
<b>Other comprehensive income:</b>			
Valuation difference on available-for-sale securities	867	5,105	7,188
Deferred gains or losses on hedges	1,016	384	8,424
Foreign currency translation adjustments	12,797	18,987	106,155
Share of other comprehensive income of unconsolidated subsidiaries and affiliates accounted for using equity method	138	116	1,141
Total other comprehensive income (Note 15)	¥14,817	¥24,593	\$122,909
<b>Comprehensive income</b>	<b>¥17,957</b>	¥34,866	<b>\$148,956</b>
Comprehensive income attributable to:			
Owners of the parent	17,620	32,350	146,167
Minority interests	336	2,516	2,789

See notes to financial statements.

# Consolidated Statements of Changes in Net Assets

## Showa Denko K.K. and Consolidated Subsidiaries

For the years ended December 31, 2014 and 2013

	Thousands	Millions of yen										
	Number of shares of capital stock	Capital stock	Capital surplus	Retained earnings	Treasury stock	Valuation difference on available-for-sale securities	Deferred gains or losses on hedges	Revaluation reserve for land	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Minority interests	Total net assets
<b>Balance at December 31, 2012</b>	1,497,113	¥140,564	¥62,222	¥53,172	¥ (145)	¥ 924	¥ (305)	¥28,025	¥(11,722)	¥ —	¥42,232	¥314,966
Dividends from surplus	—	—	—	(4,490)	—	—	—	—	—	—	—	(4,490)
Net income	—	—	—	9,065	—	—	—	—	—	—	—	9,065
Purchase of treasury stock	—	—	—	—	(5)	—	—	—	—	—	—	(5)
Disposal of treasury stock	—	—	(0)	—	1	—	—	—	—	—	—	1
Increase by increase of consolidated subsidiaries	—	—	—	576	—	—	—	—	—	—	—	576
Reversal of revaluation reserve for land	—	—	—	103	—	—	—	—	—	—	—	103
Other	—	—	—	(11)	—	—	—	—	—	—	—	(11)
Net changes of items other than shareholders' equity	—	—	—	—	—	4,926	410	(103)	18,006	—	2,368	25,607
<b>Balance at December 31, 2013</b>	1,497,113	¥140,564	¥62,221	¥58,414	¥ (149)	¥5,850	¥ 105	¥27,923	¥ 6,284	¥ —	¥44,599	¥345,811
Dividends from surplus	—	—	—	(4,490)	—	—	—	—	—	—	—	(4,490)
Net income	—	—	—	3,500	—	—	—	—	—	—	—	3,500
Purchase of treasury stock	—	—	—	—	(10,005)	—	—	—	—	—	—	(10,005)
Disposal of treasury stock	—	—	(0)	—	0	—	—	—	—	—	—	0
Increase by increase of consolidated subsidiaries	—	—	—	475	—	—	—	—	—	—	—	475
Decrease by increase of consolidated subsidiaries	—	—	—	(443)	—	—	—	—	—	—	—	(443)
Reversal of revaluation reserve for land	—	—	—	14	—	—	—	—	—	—	—	14
Other	—	—	—	(4)	—	—	—	—	—	—	—	(4)
Net changes of items other than shareholders' equity	—	—	—	—	—	934	1,158	(14)	12,733	(4,899)	(24,266)	(14,355)
<b>Balance at December 31, 2014</b>	1,497,113	¥140,564	¥62,221	¥57,467	¥(10,153)	¥6,783	¥1,262	¥27,908	¥19,018	¥(4,899)	¥20,333	¥320,504

	Thousands	Thousands of U.S. dollars (Note 5)										
	Number of shares of capital stock	Capital stock	Capital surplus	Retained earnings	Treasury stock	Valuation difference on available-for-sale securities	Deferred gains or losses on hedges	Revaluation reserve for land	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Minority interests	Total net assets
<b>Balance at December 31, 2013</b>	1,497,113	\$1,166,018	\$516,144	\$484,562	\$ (1,234)	\$48,524	\$ 868	\$231,627	\$ 52,131	\$ —	\$369,966	\$2,868,607
Dividends from surplus	—	—	—	(37,244)	—	—	—	—	—	—	—	(37,244)
Net income	—	—	—	29,036	—	—	—	—	—	—	—	29,036
Purchase of treasury stock	—	—	—	—	(82,991)	—	—	—	—	—	—	(82,991)
Disposal of treasury stock	—	—	(2)	—	3	—	—	—	—	—	—	2
Increase by increase of consolidated subsidiaries	—	—	—	3,940	—	—	—	—	—	—	—	3,940
Decrease by increase of consolidated subsidiaries	—	—	—	(3,672)	—	—	—	—	—	—	—	(3,672)
Reversal of revaluation reserve for land	—	—	—	118	—	—	—	—	—	—	—	118
Other	—	—	—	(34)	—	—	—	—	—	—	—	(34)
Net changes of items other than shareholders' equity	—	—	—	—	—	7,745	9,603	(118)	105,626	(40,639)	(201,297)	(119,080)
<b>Balance at December 31, 2014</b>	1,497,113	\$1,166,018	\$516,143	\$476,708	\$(84,221)	\$56,269	\$10,470	\$231,508	\$157,758	\$(40,639)	\$168,669	\$2,658,683

See notes to financial statements.



# Consolidated Statements of Cash Flows

## Showa Denko K.K. and Consolidated Subsidiaries

For the years ended December 31, 2014 and 2013

	Millions of yen		Thousands of U.S. dollars (Note 5)
	2014	2013	2014
<b>Cash flows from operating activities</b>			
Income before income taxes and minority interests	¥ 9,964	¥24,033	\$82,655
Adjustments for:			
Depreciation and amortization	40,673	39,779	337,399
Impairment loss	3,747	1,357	31,085
Amortization of goodwill	1,696	1,447	14,065
Increase (Decrease) in provision for retirement benefits	—	(3,159)	—
Increase (Decrease) in net defined benefit liability	1,987	—	16,484
Interest and dividends income	(3,715)	(1,300)	(30,819)
Interest expenses	4,546	4,126	37,711
Equity in (earnings) losses of unconsolidated subsidiaries and affiliates	(1,212)	264	(10,055)
Loss (Gain) on sales and valuation of investment securities	1,047	(4,586)	8,688
Loss on retirement of noncurrent assets	4,168	1,444	34,575
Loss (Gain) on sales of noncurrent assets	(28)	(66)	(233)
Decrease (Increase) in notes and accounts receivable-trade	6,829	(8,373)	56,648
Decrease (Increase) in inventories	1,453	9,113	12,052
Increase (Decrease) in notes and accounts payable-trade	(3,087)	10,226	(25,611)
Other, net	829	(3,770)	6,879
Subtotal	68,897	70,535	571,522
Interest and dividends income received	4,250	1,923	35,258
Interest expenses paid	(4,293)	(4,078)	(35,609)
Income taxes paid (refund)	(2,859)	(4,814)	(23,715)
Net cash provided by (used in) operating activities	65,996	63,565	547,457
<b>Cash flows from investing activities</b>			
Proceeds from sales and redemption of securities	—	2	—
Purchase of property, plant and equipment	(44,278)	(44,114)	(367,297)
Proceeds from sales of property, plant and equipment	901	218	7,475
Proceeds from transfer of business	—	15	—
Purchase of investment securities	(8,147)	(15,000)	(67,583)
Proceeds from sales of investment securities	10,365	14,244	85,984
Purchase of investments in subsidiaries	—	(3)	—
Purchase of investments in subsidiaries resulting in change in scope of consolidation	(5,533)	(887)	(45,896)
Net decrease (increase) in short-term loans receivable	(2)	506	(13)
Payments of long-term loans receivable	—	(1,414)	—
Collection of long-term loans receivable	234	1,434	1,941
Other, net	(766)	(1,740)	(6,355)
Net cash provided by (used in) investing activities	(47,225)	(46,738)	(391,745)
<b>Cash flows from financing activities</b>			
Increase (Decrease) in short-term debt, net	(24,907)	318	(206,610)
Proceeds from long-term loans payable	71,455	49,230	592,746
Repayments of long-term loans payable	(43,370)	(47,148)	(359,766)
Proceeds from issuance of bonds	15,000	—	124,430
Payments for retirement by purchase of Preferred equity securities	(24,000)	—	(199,088)
Proceeds from stock issuance to minority shareholders	—	1,031	—
Net decrease (increase) in treasury shares	(10,004)	(4)	(82,989)
Cash dividends paid	(4,477)	(4,472)	(37,135)
Cash dividends paid to minority shareholders	(1,291)	(1,749)	(10,711)
Other, net	(3,431)	(4,011)	(28,458)
Net cash provided by (used in) financing activities	(25,024)	(6,805)	(207,581)
<b>Effect of exchange rate changes on cash and cash equivalents</b>	3,597	5,638	29,837
<b>Net increase (decrease) in cash and cash equivalents</b>	(2,656)	15,660	(22,032)
<b>Cash and cash equivalents at beginning of the year</b>	68,175	51,254	565,533
<b>Increase in cash and cash equivalents resulting from newly consolidated subsidiaries</b>	996	1,249	8,261
<b>Increase in cash and cash equivalents resulting from merger</b>	—	12	—
<b>Cash and cash equivalents at end of the year (Note 6)</b>	¥66,515	¥68,175	\$551,762

See notes to financial statements.

# Notes to Financial Statements

## Showa Denko K.K. and Consolidated Subsidiaries

### 1. BASIS OF REPORTING AND FINANCIAL STATEMENTS

The accompanying consolidated financial statements have been prepared in accordance with accounting principles and practices generally accepted in Japan, which are different in certain respects as to application and disclosure requirements from International Financial Reporting Standards, and restructured and translated into English from the consolidated financial statements which have been filed with the Kanto Local Finance Bureau as required by the Financial Instruments and Exchange Law of Japan.

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### (a) Principles of Consolidation

The consolidated financial statements for the years ended December 31, 2014 and 2013 include the accounts of the Company and its 45 and 42, respectively, significant subsidiaries (collectively “the Companies”).

For the purposes of the consolidated financial statements, all significant intercompany transactions, account balances and unrealized profits among the Companies are entirely eliminated and the portions thereof attributable to minority interests are credited or charged to minority interests.

Accounts of subsidiaries whose business year-ends differ by more than three months from December 31 have been included using appropriate interim financial information.

In the initial consolidation, assets and liabilities of subsidiaries including those attributable to minority stockholders are recorded based on fair value in the accompanying consolidated financial statements.

Goodwill is amortized on a straight-line basis over a period during which the effect of such goodwill lasts but does not exceed 20 years from booking. In addition, negative goodwill arising from business combinations prior to April 1, 2010 is amortized on a straight-line basis over a period during which the effect of such negative goodwill lasts but does not exceed 20 years from booking.

#### (b) Investments in Unconsolidated Subsidiaries and Affiliates

The Company applied the equity method of accounting for investments in 1 unconsolidated subsidiary in 2014 and 1 that of in 2013, and 11 affiliates in 2014 and 14 affiliates in 2013.

All underlying intercompany profits obtained from transactions among the Companies and unconsolidated subsidiaries and affiliates to which the equity method is applied are eliminated in the consolidated financial statements.

#### (c) Translation of Foreign Currency Accounts

All receivables and payables denominated in foreign currencies at the balance sheet date are translated into Japanese yen at the current exchange rates.

The resulting exchange gains or losses are credited or charged to income.

The financial statements of certain consolidated subsidiaries of foreign nationality are translated into Japanese yen at the year-end rate for assets and liabilities, at historical rates for the other balance sheet accounts exclusive of the current year's net

income, and at the average annual rate for revenue and expense accounts and net income.

Translation adjustments resulting from the process of translating the financial statements of foreign subsidiaries into Japanese yen are accumulated and reported as a component of net assets on the consolidated balance sheets.

#### (d) Cash and Cash Equivalents

Cash and cash equivalents in the consolidated statement of cash flows are composed of cash on hand, bank deposits available for withdrawal on demand and short-term investments with original maturities of three months or less and minor risk of value fluctuation.

#### (e) Securities

Debt securities that are intended to be held to maturity (“held-to-maturity debt securities”) are stated at amortized cost on the balance sheets. Available-for-sale securities with available fair market values are stated at fair market values. Unrealized gains and unrealized losses on these available-for-sale securities are reported, net of applicable income taxes, as a separate component of the net assets.

Realized gains or losses on sale of the available-for-sale securities are computed using primarily the moving-average cost.

Available-for-sale securities with no available fair market values are stated primarily at moving-average cost.

#### (f) Allowance for Doubtful Accounts

To provide for losses from bad debts, the allowance is provided according to the actual rate of default for ordinary receivables and in view of the probability of recovery for specific doubtful receivables.

#### (g) Inventories

Inventories are stated at the lower of cost or market, using principally the gross-average cost method. The carrying value on the consolidated balance sheets is stated by the devaluation method based on declines in profitability.

#### (h) Property, Plant and Equipment

Property, plant and equipment is stated at cost, in principle. Depreciation of property, plant and equipment is computed by the straightline method.

#### (i) Intangible Assets

The Company and some of the consolidated subsidiaries principally apply the straight-line method over 5 years to amortize intangible assets.

#### (j) Leased Assets

Leased assets in finance lease transactions that do not transfer ownership to the lessee are depreciated using the straight-line method on the assumption that the useful life is equal to the lease term and the residual value is equal to zero. For leases with a residual value guarantee, the contracted residual value is considered to be the residual value for financial accounting purposes.

Please note that finance lease transactions, other than those involving the transfer of ownership and which commenced on or before December 31, 2008, are accounted for by the same methods as for operating lease transactions.

#### **(k) Provision for Business Structure Improvement**

The Company and some of the consolidated subsidiaries record the provision for business structure improvement on an accrual basis to provide for expenses and losses resulting from their restructuring programs.

#### **(l) Provision for Bonuses**

A provision for bonuses is provided at an amount estimated based on the bonus to be paid subsequent to the balance sheet date.

#### **(m) Provision for Repairs**

The Company and some of the consolidated subsidiaries provide a provision for repairs in an amount estimated to be necessary for the scheduled maintenance for certain production equipment.

#### **(n) Provision for Niigata Minamata Disease**

To provide for lump-sum payments pursuant to the Special Measures Law Regarding Relief to Persons Suffering from Minamata Disease and Regarding Solutions to the Minamata Disease Problem, the Company makes a provision in the expected amount of such payments.

#### **(o) Accounting Policy for Retirement Benefits**

##### **(1) Method of attributing expected benefits to periods**

The attribution of expected benefits to periods up to the current consolidated fiscal year, upon calculating retirement benefit obligations, is done on a straight-line basis.

##### **(2) Method of amortization of actuarial gain or loss and prior service costs**

The actuarial gain or loss is amortized starting from the year after such an actuarial loss is determined on a straight-line basis over certain periods (mainly 12 years) within the average remaining service periods.

Prior service costs are amortized on a straight-line basis over certain periods (mainly 12 years) within the average remaining service periods.

##### **(3) Application of a simplified method to small businesses**

For the calculation of liabilities concerning retirement benefits and retirement benefit expenses, some consolidated subsidiaries have adopted a simplified method, which deems term-end amounts payable for voluntary retirement related to retirement benefits as retirement benefit obligations.

#### **(p) Income Taxes**

Income taxes consist of corporation, enterprise and inhabitants taxes. The provision for income taxes is computed based on the pretax income of each of the Company and its consolidated

subsidiaries with certain adjustments required for consolidation and tax purposes. The asset and liability approach is used to recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the carrying amounts and the tax bases of assets and liabilities. (Valuation allowances are recorded to reduce deferred tax assets based on the assessment of the realizability of the tax benefits.)

#### **Application of the Consolidated Taxation System**

The Company and certain domestic subsidiaries adopt the consolidated taxation system.

#### **(q) Derivative Financial Instruments and Hedge Accounting**

The Company and certain subsidiaries state all derivative financial instruments at fair value and recognize changes in fair value as gains or losses unless the derivative financial instruments are used for hedging purposes.

If the derivative financial instruments meet certain hedging criteria, the Company and certain subsidiaries defer recognition of gains or losses resulting from changes in fair value of derivative financial instruments until the related gains or losses on hedged items are recognized.

However, when forward exchange contracts meet certain hedging criteria, the hedged items are stated by the forward exchange contracts rate. If interest rate swap contracts meet certain hedging criteria, the net amount to be paid or received under the interest rate swap contracts is added to or deducted from interest on the assets or liabilities for which the interest rate swap contracts were executed.

Hedge accounting is not applied at some of the foreign subsidiaries.

#### **(r) Reclassifications**

Certain reclassifications have been made in the 2013 financial statements to conform to the presentation of 2014.

### **3. CHANGES IN ACCOUNTING POLICIES**

#### **Application of the Accounting Standard for Retirement Benefits**

The Accounting Standard for Retirement Benefits (Accounting Standards Board of Japan (ASBJ) Statement No. 26 issued on May 17, 2012, hereafter, the “Retirement Benefits Accounting Standard”) and the Guidance on Accounting Standard for Retirement Benefits (ASBJ Guidance No. 25 issued on May 17, 2012, hereafter, the “Retirement Benefits Guidance”) were implemented effective from the year ended December 31, 2014 (excluding the provisions stipulated in the main clause of Article 35 of the Retirement Benefits Accounting Standard and the main clause of Article 67 of the Retirement Benefits Guidance). The posting method was changed to post the amount obtained by after deducting the amount of pension assets from retirement benefits obligations as assets and liabilities concerning retirement benefits, and the unrecognized actuarial differences and unrecognized past service costs were posted as assets and liabilities concerning retirement benefits. The implementation of accounting standards

for retirement benefits, etc., conforms to the transitional treatment stipulated in Article 37 of the Retirement Benefits Accounting Standard, and the effect of the said change has been adjusted in the remeasurement of the defined benefits plan of accumulated other comprehensive income as of December 31, 2014.

As a result, ¥20 million (US\$166 thousand) in assets and ¥22,115 million (US\$183,452 thousand) in liabilities concerning retirement benefits were posted as of December 31, 2014. In addition, accumulated other comprehensive income decreased by ¥4,899 million (US\$40,639 thousand), and net assets per share diminished by ¥3.43.

#### 4. NEW ACCOUNTING STANDARDS NOT YET APPLIED

“Accounting Standard for Retirement Benefits” (Accounting Standards Board of Japan Statement No. 26, issued on May 17, 2012) and “Guidance on Accounting Standard for Retirement Benefits” (Accounting Standards Board of Japan Guidance No. 25, issued on May 17, 2012)

##### (a) Overview

Revisions apply mainly to the accounting treatments for unrecognized actuarial gains and losses as well as unrecognized prior service costs, the calculation methods for retirement benefit obligations as well as service costs. In addition, disclosure requirements were enhanced.

##### (b) Scheduled Effective Date

Revisions to the calculation methods for retirement benefit obligations and service costs are scheduled to take effect from the beginning of the consolidated fiscal year ending December 31, 2015.

Since transitional treatment is applied to the accounting standard and guidance, the revisions will not be applied to consolidated financial statements for past accounting periods.

##### (c) The impact of the Adoption of the Revised Accounting Standards and Guidance

The impact of the adoption of the revised accounting standards and guidance on consolidated financial statements is currently under evaluation.

#### 5. JAPANESE YEN AND TRANSLATION INTO U.S. DOLLARS

The Companies' accounting records are maintained in yen. Yen amounts included in the financial statements are rounded to the nearest one million unit. Therefore, the total and subtotal amounts presented in the financial statements may not equal the exact sum of the individual balances. The U.S. dollar amounts appearing in the accompanying financial statements and notes thereto represent the arithmetical results of translating yen into U.S. dollars at the rate of ¥120.55 to US\$1.00, the approximate rate of exchange at December 31, 2014. The inclusion of such U.S. dollar amounts is solely for the convenience of readers; it does not carry with it any implication that yen amounts have been or could be converted into U.S. dollars at that rate.

#### 6. CASH FLOW STATEMENTS

Cash and deposits as of December 31, 2014 and 2013 on the consolidated balance sheets and cash equivalents at December 31, 2014 and 2013 on the consolidated statements of cash flows were reconciled as follows:

	Millions of yen		Thousands of U.S. dollars
	2014	2013	2014
Cash and deposits	¥66,840	¥68,250	\$554,455
Original maturities more than three months	(325)	(75)	(2,693)
Cash and cash equivalents	¥66,515	¥68,175	\$551,762

#### 7. FINANCIAL INSTRUMENTS

##### (a) Overview

##### (1) Management policy relating to financial instruments

The Companies finance necessary long-term funds by bank loans and bond issues following the capital investment plans and finance short-term operating funds by bank loans and commercial paper. Temporary excess funds are invested exclusively in financial instruments which have fixed returns and low risk of falling below par values. The Companies use derivative transactions to hedge the following risks and do not enter into derivative transactions for speculative purposes.

##### (2) Types of financial instruments and related risks

Operating receivables, such as notes and accounts receivable, are exposed to credit risk. Foreign-currency-denominated accounts receivable incurred through exports are exposed to foreign currency fluctuation risk. However, the Companies hedge the risk by utilizing forward exchange contracts, currency options, and currency swaps based on internal rules that set out foreign currency risk management principles.

Marketable securities and investment securities mainly consist of the stocks of partner companies to maintain and strengthen their business relationships and are exposed to market fluctuation risk.

Operating payables, such as notes and accounts payable-trade and other, are due within one year. Foreign-currency-denominated accounts payable incurred through imports of raw materials are exposed to foreign currency fluctuation risk. The Companies hedge the risk by utilizing forward exchange contracts following internal rules that set out the foreign currency risk management principles. Short-term debt and commercial paper are mainly used to finance short-term operating funds, and long-term debts and bonds are mainly used to finance equipment funds. Since some of long-term debt is made up of variable interest rate loans, it is exposed to interest rate fluctuation risk. However, interest rate swaps are used for most loans to hedge the risk.

The Companies utilize derivative transactions, such as forward exchange contracts, currency options, and currency swaps, to hedge the foreign currency fluctuation risk of operating receivables and payables denominated in foreign currencies and financing transactions denominated in foreign currencies. Interest rate swaps are utilized to hedge the interest rate fluctuation risk, and



aluminum forward transactions are utilized to hedge the market fluctuation risk.

### (3) Risk management relating to financial instruments

#### (i) Credit risk management (risk of default by the counterparties)

The Company follows internal rules that set out accounts receivable management principles. The compliance department works with the sales division in each sector and monitors the customers' credit conditions periodically and reviews the sales policy checking the sales volume and balances. The Company takes measures to obtain information on and minimize the credit risk that may arise due to the deterioration in the financial condition of their customers. Consolidated subsidiaries monitor their customers' financial and credit conditions based on their internal rules.

The held-to-maturity debt are limited to only highly rated securities.

The Companies utilize derivative transactions only with creditworthy financial institutions and trading companies to minimize credit risk.

The maximum credit risk as of December 31, 2014 is disclosed as the balance sheet amount of financial instruments exposed to credit risk.

#### (ii) Market risk management (risk of fluctuations in foreign currency and interest rates)

For operating receivables and payables and loans denominated in foreign currencies, the Company and certain consolidated subsidiaries utilize forward exchange contracts, currency options, and currency swaps to hedge some of the foreign currency fluctuation risk, which is categorized by currency and maturity date. The Company and certain consolidated subsidiaries utilize currency swaps to hedge the interest rate fluctuation risk of loans.

For marketable securities and investment securities, the Companies regularly review the fair value and issuers' financial conditions and review the Companies' portfolio on an ongoing basis, except for held-to-maturity debt securities, according to market conditions and the business relationships with counterparties.

The Company has internal management rules that set out the approval authorities and procedures of the derivative transactions.

The derivative transactions are carried out based on the appropriate approver set out in the internal rules. For currency-related derivative transactions, each division and the treasury department perform and manage transactions and report to the director in charge periodically. For interest-related derivative transactions, the treasury department performs and manages the transactions and reports to the director in charge periodically. For commodity-related derivative transactions, each division performs and manages the transactions and reports to the director in charge periodically. Consolidated subsidiaries perform and manage derivative transactions based on their internal management standards.

#### (iii) Liquidity risk management (risk of default on payment due dates)

The Company manages liquidity risk by requiring the treasury department to prepare and update cash plans, based on the schedule for cash inflows and disbursements in each division. In addition, the Company signs commitment line contracts and makes other arrangements with financial institutions to secure the necessary liquidity. Consolidated subsidiaries manage their liquidity risk through similar procedures.

#### (4) Supplemental explanation on fair value of financial instruments

As well as the values being based on market prices, fair value of financial instruments includes values which are reasonably calculated in case market prices do not exist. As the calculation of those values uses certain assumptions, those values may vary in the case of different assumptions being applied. Also, for the contract amount and others regarding derivative transactions described in Note 9. DERIVATIVE FINANCIAL INSTRUMENTS, the contract amount itself does not indicate market risk related to derivative transactions.

#### (b) Fair Value of Financial Instruments

At December 31, 2014 and 2013 book value, fair value and difference were as follows.

The financial instruments whose fair value is extremely difficult to determine are not included below.

Year ended December 31, 2014	Millions of yen		
	Book value	Fair value	Difference
(1) Cash and deposits	¥ 66,840	¥ 66,840	¥ —
(2) Notes and accounts receivable-trade	156,880	156,880	—
(3) Investment securities	43,020	43,020	—
Total assets	¥266,740	¥266,740	¥ —
(1) Notes and accounts payable-trade	¥127,206	¥127,206	¥ —
(2) Short-term debt	76,519	76,519	—
(3) Current portion of long-term debt	80,486	80,752	266
(4) Accounts payable-other	68,319	68,319	—
(5) Long-term debt less current portion	226,119	227,180	1,062
Total liabilities	¥578,649	¥579,977	¥1,328
Derivative transactions*	¥ 949	¥ 949	¥ —

Year ended December 31, 2013	Millions of yen		
	Book value	Fair value	Difference
(1) Cash and deposits	¥ 68,250	¥ 68,250	¥ —
(2) Notes and accounts receivable-trade	156,090	156,090	—
(3) Investment securities	44,399	44,399	—
Total assets	¥268,740	¥268,740	¥ —
(1) Notes and accounts payable-trade	¥124,194	¥124,194	¥ —
(2) Short-term debt	96,182	96,182	—
(3) Current portion of long-term debt	41,694	41,833	139
(4) Accounts payable-other	53,990	53,990	—
(5) Long-term debt less current portion	215,811	217,037	1,226
Total liabilities	¥531,871	¥533,237	¥1,366
Derivative transactions*	¥ (115)	¥ (115)	¥ —

Year ended December 31, 2014	Thousands of U.S. dollars		
	Book value	Fair value	Difference
(1) Cash and deposits	\$ 554,455	\$ 554,455	\$ —
(2) Notes and accounts receivable-trade	1,301,371	1,301,371	—
(3) Marketable securities and investment securities	356,865	356,865	—
Total assets	\$2,212,692	\$2,212,692	\$ —
(1) Notes and accounts payable-trade	\$1,055,213	\$1,055,213	\$ —
(2) Short-term debt	634,751	634,751	—
(3) Current portion of long-term debt	667,659	669,866	2,206
(4) Accounts payable-other	566,730	566,730	—
(5) Long-term debt less current portion	1,875,725	1,884,532	8,807
Total liabilities	\$4,800,078	\$4,811,091	\$11,014
Derivative transactions*	\$ 7,875	\$ 7,875	\$ —

\*Derivative assets and liabilities are on a net basis.

Notes: 1. Valuation method for financial instruments and information on marketable securities and derivative transactions

#### Assets

Cash and deposits and Notes and accounts receivable-trade

The book value is deemed to approximate the fair value since these are scheduled to be settled in a short period of time.

Marketable securities and investment securities

Fair value of these securities is based on the price on stock exchanges. Refer to Note 8. SECURITIES regarding the securities categorized by holding purposes.

#### Liabilities

Notes and accounts payable-trade, Short-term debt, Commercial paper, and Accounts payable-other

The book value is deemed to approximate the fair value since these are scheduled to be settled in a short period of time.

Current portion of long-term debt and Long-term debt

The fair value is measured as the net present value of estimated cash flows by discounting the principal and interest value using the interest rate applied to the new loans. Part of the long-term loans are variable rate loans, and they are subject to special treatment of interest rate swaps (refer to Note 9. DERIVATIVE FINANCIAL INSTRUMENTS); the fair value is measured as the net present value of estimated cash flows by discounting the total amount of principal and interest processed as interest rate swaps using the interest rate applied to the new loans.

Current portion of bonds and Bonds

As for bonds with short maturities, the book value is deemed to approximate the fair value since these are scheduled to be settled in a short period of time. For others, fair value is based on the market prices.

#### Derivative transactions

Refer to Note 9. DERIVATIVE FINANCIAL INSTRUMENTS.

2. Financial instruments for which fair value is extremely difficult to determine

	Millions of yen		Thousands of U.S. dollars
	2014	2013	2014
Non-listed equity securities	¥33,093	¥34,289	\$274,513

These securities are not included in the above Marketable securities and investment securities, as there was no quoted market value, estimating the future cash flows is deemed to be practically impossible and it is extremely difficult to determine the fair value.

3. The redemption schedule for financial assets and securities with maturities

Year ended December 31, 2014	Millions of yen			
	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years through 10 years	Due after 10 years
Cash and deposits	¥ 66,840	¥ —	¥—	¥—
Notes and accounts receivable-trade	156,676	205	—	—
Total	¥223,515	¥205	¥—	¥—

Year ended December 31, 2013	Millions of yen			
	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years through 10 years	Due after 10 years
Cash and deposits	¥ 68,250	¥—	¥—	¥—
Notes and accounts receivable-trade	156,090	—	—	—
Total	¥224,340	¥—	¥—	¥—

Year ended December 31, 2014	Thousands of U.S. dollars			
	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years through 10 years	Due after 10 years
Cash and deposits	\$ 554,455	\$ —	\$—	\$—
Notes and accounts receivable-trade	1,299,673	1,699	—	—
Total	\$1,854,128	\$1,699	\$—	\$—

## 4. The scheduled maturities of bonds and long-term debt after December 31, 2014 and 2013.

Year ended December 31, 2014	Millions of yen					
	Due in 1 year or less	Due after 1 year through 2 years	Due after 2 year through 3 years	Due after 3 years through 4 years	Due after 4 year through 5 years	Due after 5 years
(1) Short-term debt	¥ 76,519	¥ —	¥ —	¥ —	¥ —	¥ —
(2) Long-term debt (Excluding current portion)	80,486	57,141	53,304	55,605	19,968	40,100
Total	¥157,005	¥57,141	¥53,304	¥55,605	¥19,968	¥40,100

Year ended December 31, 2013	Millions of yen					
	Due in 1 year or less	Due after 1 year through 2 years	Due after 2 year through 3 years	Due after 3 years through 4 years	Due after 4 year through 5 years	Due after 5 years
(1) Short-term debt	¥ 96,182	¥ —	¥ —	¥ —	¥ —	¥ —
(2) Long-term debt (Excluding current portion)	41,694	79,120	56,733	48,402	29,055	2,500
Total	¥137,876	¥79,120	¥56,733	¥48,402	¥29,055	¥2,500

Year ended December 31, 2014	Thousands of U.S. dollars					
	Due in 1 year or less	Due after 1 year through 2 years	Due after 2 year through 3 years	Due after 3 years through 4 years	Due after 4 year through 5 years	Due after 5 years
(1) Short-term debt	\$ 634,751	\$ —	\$ —	\$ —	\$ —	\$ —
(2) Long-term debt (Excluding current portion)	667,659	474,003	442,177	461,262	165,640	332,642
Total	\$1,302,410	\$474,003	\$442,177	\$461,262	\$165,640	\$332,642

## 8. SECURITIES

## (a) Available-for-sale securities

Year ended December 31, 2014	Millions of yen		
	Book value	Acquisition cost	Difference
Available-for-sale securities whose book value exceeds their acquisition cost			
Equity securities	¥38,391	¥25,230	¥13,161
Available-for-sale securities whose book value is less than their acquisition cost			
Equity securities	4,629	5,248	(619)
Total	¥43,020	¥30,479	¥12,541

Year ended December 31, 2013	Millions of yen		
	Book value	Acquisition cost	Difference
Available-for-sale securities whose book value exceeds their acquisition cost			
Equity securities	¥37,755	¥25,024	¥12,732
Available-for-sale securities whose book value is less than their acquisition cost			
Equity securities	6,644	7,704	(1,060)
Total	¥44,399	¥32,728	¥11,672

Year ended December 31, 2014	Thousands of U.S. dollars		
	Book value	Acquisition cost	Difference
Available-for-sale securities whose book value exceeds their acquisition cost			
Equity securities	\$318,464	\$209,293	\$109,172
Available-for-sale securities whose book value is less than their acquisition cost			
Equity securities	38,401	43,537	(5,136)
Total	\$356,865	\$252,830	\$104,035

## (b) Available-for-sale securities sold in the years ended December 31, 2014 and 2013:

Year ended December 31, 2014	Millions of yen		
	Sales	Gross gain	Gross loss
Equity securities	¥6,425	¥2,284	¥(1)
Total	¥6,425	¥2,284	¥(1)

Year ended December 31, 2013	Millions of yen		
	Sales	Gross gain	Gross loss
Equity securities	¥13,707	¥4,627	¥(11)
Total	¥13,707	¥4,627	¥(11)

Year ended December 31, 2014	Thousands of U.S. dollars		
	Sales	Gross gain	Gross loss
Equity securities	\$53,299	\$18,948	\$(8)
Total	\$53,299	\$18,948	\$(8)

## (c) Impairment of securities

For the years ended December 31, 2014 and 2013, the Companies recorded an impairment loss of ¥4,019 million (US\$33,341 thousand) on available-for-sale securities and ¥145 million on available-for-sale securities with fair market values, respectively.

Securities are deemed to be "substantially declined" when their fair values have declined 30% or more. When their fair values have declined 50% or more, the impairment losses are recorded on those securities. When their fair values have declined between 30% and 50%, the impairment losses are recorded on those securities unless such values are considered to be recoverable on an individual basis.

## 9. DERIVATIVE FINANCIAL INSTRUMENTS

### (a) Derivative Transactions to Which Hedge Accounting Is Not Applied

	Millions of yen								Thousands of U.S. dollars			
	2014				2013				2014			
	Contract amount	Contract amount over 1 year	Fair value	Valuation gain (loss)	Contract amount	Contract amount over 1 year	Fair value	Valuation gain (loss)	Contract amount	Contract amount over 1 year	Fair value	Valuation gain (loss)
<b>(1) Currency related:</b>												
Forward exchange contracts:												
Selling												
U.S.Dollar	¥7,027	¥ —	¥(618)	¥(618)	¥ 5	¥ —	¥ 0	¥ 0	\$58,293	\$ —	\$(5,130)	\$(5,130)
Euro	20	—	(0)	(0)	—	—	—	—	163	—	(4)	(4)
<b>(2) Interest rate related:</b>												
Interest rate swaps:												
Receipt-variable rate/Payment-fixed rate	¥6,217	¥3,278	¥(120)	¥(120)	¥7,796	¥5,331	¥(227)	¥(227)	\$51,570	\$27,188	\$ (992)	\$ (992)

Note: Fair value calculation method:

Fair values of forward exchange contracts are stated by the forward exchange rates. Fair values of currency and interest rate swaps are measured at the quoted price obtained from the financial institutions.



**(b) Derivative Transactions to Which Hedge Accounting Is Applied**

	Millions of yen						Thousands of U.S. dollars		
	2014			2013			2014		
	Contract amount	Contract amount over 1 year	Fair value	Contract amount	Contract amount over 1 year	Fair value	Contract amount	Contract amount over 1 year	Fair value
<b>(1) Currency related:</b>									
<b>Principle method</b>									
Forward exchange contracts:									
Buying									
U.S. Dollar	¥ 7,256	¥ 196	¥ 628	¥ 7,758	¥ 163	¥344	\$ 60,189	\$ 1,628	\$ 5,207
Euro	39	—	0	27	—	0	320	—	1
Canadian Dollar	—	—	—	3	—	0	—	—	—
Selling									
U.S. Dollar	21,517	—	(642)	21,533	—	(748)	178,490	—	(5,329)
Euro	735	—	(13)	1,713	—	(81)	6,100	—	(105)
Yuan Renminbi	—	—	—	2	—	0	—	—	—
<b>Allocation method</b>									
Forward exchange contracts:									
Buying									
U.S. Dollar	¥ 3,585	¥ —	¥ —	¥ 10,716	¥ —	¥ —	\$ 29,742	\$ —	\$ —
Euro	14	—	—	14	—	—	119	—	—
Selling									
U.S. Dollar	15,660	—	—	20,346	—	—	129,904	—	—
Euro	1,923	—	—	2,214	—	—	15,952	—	—
Yuan Renminbi	—	—	—	30	—	—	—	—	—
Currency swaps:									
Receipt Yen									
Payment U.S. Dollar	¥ 7,500	¥ 7,500	¥ —	¥ 2,500	¥ 2,500	¥ —	\$ 62,215	\$ 62,215	\$ —
<b>(2) Interest rate related:</b>									
<b>Special method</b>									
Interest rate swaps:									
Receipt-variable rate/Payment-fixed rate	¥101,425	¥78,150	¥ —	¥119,654	¥95,025	¥ —	\$841,352	\$648,279	\$ —
<b>(3) Commodity related:</b>									
<b>Principle method</b>									
Aluminum forward contracts:									
Buying	¥ 12,907	¥ 4,743	¥1,567	¥ 15,970	¥ 7,734	¥601	\$107,069	\$ 39,346	\$12,997
Selling	1,953	—	147	1,582	—	(4)	16,202	—	1,222

Notes: 1. Main items hedged by forward exchange contracts are accounts payable for buying, accounts receivable for selling and long-term debt by interest rate swaps. Main items hedged by aluminum forward transactions are aluminum metal transactions.

2. Fair value calculation method:

Fair values of forward exchange contracts are stated by the forward exchange rates. Fair values of currency swaps are measured at the quoted price obtained from the financial institutions. Fair values of aluminum forward transactions are stated by forward quotations of the London Metal Exchange.

3. Fair values of forward exchange contracts that meet allocation method criteria are reflected in the fair values of accounts receivable and accounts payable of their hedged items.

4. Fair values of interest rate swaps that meet special treatment criteria are reflected in the fair values of long-term debt of their hedged item.

## 10. EFFECT OF YEAR-END DATE ON FINANCIAL STATEMENTS

The year-end date of 2014, namely, December 31, 2014, was a bank holiday. Although notes receivable and payable maturing on this date were accordingly settled on January 5, 2015, the Companies accounted for those notes in their financial statements as if they had been settled on the maturity date.

Notes outstanding at December 31, 2014 and 2013 dealt with in the above-mentioned manner were as follows:

	Millions of yen		Thousands of U.S. dollars
	2014	2013	2014
Notes receivable	¥656	¥709	\$5,445
Notes payable	518	614	4,298

## 11. SHORT-TERM DEBT AND LONG-TERM DEBT

At December 31, 2014 and 2013, the short-term debt of the Companies consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2014	2013	2014
Bank loans at the average interest rate of 0.89%	¥71,519	¥78,182	\$593,274
Commercial paper	5,000	18,000	41,477
Total	¥76,519	¥96,182	\$634,751

At December 31, 2014 and 2013, the long-term debt of the Companies consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2014	2013	2014
0.88% bonds due 2015	¥ 10,000	¥ 10,000	\$ 82,953
0.67% bonds due 2016	10,000	10,000	82,953
0.63% bonds due 2017	10,000	10,000	82,953
0.63% bonds due 2021	15,000	—	124,430
¥24,000,000,000 subordinated convertible bonds due 2014	—	24,000	—
Loans principally from banks and insurance companies due 2015 to 2074 at the average interest rate of 0.97%	261,605	227,505	2,170,095
	306,605	281,505	2,543,384
Elimination of intercompany transactions	—	(24,000)	—
Less: Current portion	(80,486)	(41,694)	(667,657)
Total	¥226,119	¥215,811	\$1,875,727

Note: Information on bonds with stock acquisition rights is as follows:

Bonds	¥24,000,000,000 subordinated convertible bonds due 2014
Kind of stock	The Company's common stock
Issue price of rights (¥)	No cost
Issue price (¥)	¥291 per share
Total amount of issue (¥)	¥24,000,000,000
Total amount of stock acquisition rights exercised (¥)	—
Percentage of stock acquisition rights granted (%)	100
Exercisable period	October 15, 2009 to October 21, 2014

Note: When stock acquisition rights are exercised, the corresponding bonds with such acquisition rights are all invested. The prices of such bonds are deemed to be their face value. The initial conversion price was ¥291.

The aggregate annual maturities of the noncurrent portion of long-term debt were as follows:

Years ending December 31	Millions of yen	Thousands of U.S. dollars
2016	¥ 57,141	\$ 474,003
2017	53,304	442,177
2018	55,605	461,262
2019	19,968	165,640
2020 and thereafter	40,100	332,642
Total	¥226,119	\$1,875,725

At December 31, 2014 and 2013, the assets pledged as collateral for long-term debt were as follows:

	Millions of yen		Thousands of U.S. dollars
	2014	2013	2014
Assets pledged as collateral			
Investment securities	¥ 3,031	¥ 3,019	\$ 25,143
Property, plant and equipment, less accumulated depreciation	150,908	151,512	1,251,822
Total	¥153,938	¥154,531	\$1,276,965
Secured short-term debt and long-term debt			
Long-term debt (includes due within 1 year)	¥ 50	¥ 102	\$ 415
Other debt	161	154	1,336
Total	¥ 211	¥ 256	\$ 1,750

## 12. RETIREMENT BENEFITS

(a) Defined-benefit pension plan, includes the plans using the simplified method

(1) Reconciliation of opening and closing balance of retirement benefit obligation for the year ended December 31, 2014 were as follows:

	Millions of yen	Thousands of U.S. dollars
Balance of retirement benefit obligation at the beginning of year	¥86,672	\$718,972
Service cost	2,305	19,122
Interest cost	1,680	13,935
Actuarial gain and loss	11,967	99,272
Retirement benefits paid	(5,434)	(45,075)
Other	(840)	(6,965)
Balance of the retirement benefit obligation at the end of year	¥96,351	\$799,261

(2) Reconciliation of opening and closing balance of plan assets for the year ended December 31, 2014 were as follows:

	Millions of yen	Thousands of U.S. dollars
Balance of plan assets at the beginning of year	¥66,658	\$552,946
Expected return on plan assets	1,335	11,075
Actuarial gain and loss	3,233	26,816
Contribution from employer	8,166	67,736
Retirement benefits paid	(5,243)	(43,496)
Other	108	899
Balance of plan assets at the end of year	¥74,256	\$615,975

**(3) Reconciliation of the ending balance of retirement benefit obligations and plan assets, and the net defined benefit liability and the net defined benefit asset for the year ended December 31, 2014 were as follows:**

	Millions of yen	Thousands of U.S. dollars
Funded retirement benefit obligations	¥93,131	\$772,552
Plan assets	(74,256)	(615,975)
	18,875	156,577
Unfunded retirement benefit obligations	3,220	26,709
Net amount of relevant liabilities and assets on the consolidated balance sheets	22,095	183,286
Net defined benefit liability	22,115	183,453
Net defined benefit asset	(20)	(166)
Net amount of relevant liabilities and assets on the consolidated balance sheets	22,095	183,286

**(4) Retirement benefit expenses and the components of the amounts thereof for the year ended December 31, 2014 were as follows:**

	Millions of yen	Thousands of U.S. dollars
Service cost	¥ 2,305	\$19,122
Interest cost	1,680	13,935
Expected return on plan assets	(1,335)	(11,075)
Amortization of actuarial differences	1,968	16,328
Amortization of prior service cost	(752)	(6,237)
Retirement benefit expenses related to the defined-benefit pension plan	¥ 3,866	\$32,073

**(5) Remeasurements of defined benefit plans**

The components of items (before tax) reported under remeasurements of defined benefit plans for the year ended December 31, 2014 were as follows:

	Millions of yen	Thousands of U.S. dollars
Unrecognized prior service cost	¥ (769)	\$ (6,375)
Unrecognized actuarial differences	8,207	68,078
Total	¥7,438	\$61,703

**(6) Matters regarding plan assets**

**(i) Major content of the plan assets**

The percentages of major asset types that account for the total plan assets as of December 31, 2014 were as follows:

Bonds	35%
Stocks	38
General accounts of life insurance company	26
Cash and deposits	1
Total	100%

**(ii) Method for setting the long-term rate of expected return on plan assets**

To determine the long-term rate of expected return on plan assets, the current and projected distribution of plan assets, as well as the current and anticipated long-term yield rates of various assets that constitute the plan assets, have been taken into account.

**(7) Matters regarding the assumptions for actuarial calculations**

Key assumptions for actuarial calculations as of December 31, 2014 were as follows:

Discount rate	Mainly 0.9%
Long-term rate of expected return on plan assets	Mainly 2.0%

**(b) Defined contribution pension plan**

The amount required to be contributed by consolidated subsidiaries for the year ended December 31, 2014 was ¥369million (US\$3,059 thousand).

**(c) The plans' funded status and amount recognized on the accompanying consolidated balance sheets as of December 31, 2013 were as follows:**

	Millions of yen
Benefit obligation at the end of year	¥(86,672)
Fair value of plan assets at the end of year	66,658
Funded status	(20,014)
Unrecognized actuarial loss	1,441
Unrecognized prior service cost	(1,520)
Net amount recognized	(20,094)
Prepaid pension expense	216
Provision for retirement benefits	¥(20,310)

**(d) The components of net retirement benefit costs for the years ended December 31, 2013 were as follows:**

	Millions of yen
Service cost	¥2,282
Interest cost	1,740
Expected return on plan assets	(1,088)
Recognized actuarial loss	3,263
Prior service cost	(752)
Net periodic cost	5,445
Cost for defined contribution plan	350
Total	¥5,795

**(e) The assumptions and basis as of December 31, 2013 were as follows:**

Discount rate	Mainly 2.0%
Expected rate of return on plan assets	Mainly 2.0%
Amortization period for actuarial loss	Mainly 12 years
Amortization period for prior service cost	Mainly 12 years

### 13. INCOME TAXES

#### (a) At December 31, 2014 and 2013, significant components of deferred tax assets and liabilities were as follows:

	Millions of yen		Thousands of U.S. dollars
	2014	2013	2014
Deferred tax assets:			
Tax loss carryforwards	¥26,263	¥24,755	\$217,857
Write-down of marketable and investment securities	10,471	8,525	86,863
Provision for retirement benefits	—	7,332	—
Net defined benefit liability	7,802	—	64,722
Impairment loss	4,496	4,649	37,292
Allowance for doubtful accounts	1,528	406	12,673
Depreciation and amortization	1,253	859	10,395
Unrealized earnings from the sale of fixed assets	840	919	6,966
Loss on valuation of inventories	796	810	6,604
Provision for bonuses	673	681	5,584
Deduction of foreign corporation tax carried forward	536	515	4,446
Undetermined accrued liabilities	523	970	4,334
Write-down of golf club memberships	383	582	3,181
Provision for repairs	238	1,300	1,974
Deferred gains or losses on hedges	64	168	531
Other	3,484	1,770	28,899
Subtotal of deferred tax assets	59,349	54,241	492,322
Valuation allowance	(30,183)	(24,533)	(250,379)
Total deferred tax assets	29,166	29,708	241,943
Deferred tax liabilities:			
Valuation difference on available-for-sale securities	(4,410)	(4,388)	(36,583)
Amount of revaluation from the book value	(4,267)	(4,343)	(35,395)
Foreign subsidiaries' undistributed retained earnings	(1,738)	(1,589)	(14,417)
Special depreciation reserve	(1,172)	(1,246)	(9,721)
Reserve for advanced depreciation of fixed assets	(225)	(256)	(1,865)
Other	(1,180)	(588)	(9,791)
Total deferred tax liabilities	(12,992)	(12,410)	(107,774)
Allowance for doubtful accounts	¥16,174	¥17,298	\$134,169

#### (b) The net deferred tax assets at December 31, 2014 and 2013 were included in the consolidated balance sheets as follows:

	Millions of yen		Thousands of U.S. dollars
	2014	2013	2014
Deferred tax assets—current	¥ 4,244	¥ 4,810	\$ 35,204
Deferred tax assets—noncurrent	15,563	15,889	129,102
Other current liabilities	(180)	(97)	(1,496)
Deferred tax liabilities—noncurrent	(3,453)	(3,305)	(28,640)

#### (c) Significant items in the reconciliation of the normal income tax rate to the effective at December 31, 2014 and 2013 were as follows:

	2014	2013
Statutory tax rate	38.0%	38.0%
Differences of statutory tax rate in subsidiaries	(35.3)	(11.4)
Consolidated adjustment for loss on valuation of investments in capital of subsidiaries and associates	(16.2)	—
Unrealized earnings from the sale of fixed assets	(1.9)	(1.6)
Effect on the reexamination of recoverability	70.4	27.9
Amortization of goodwill	6.3	2.0
Effects of changes in the effective statutory tax rate	3.8	1.0
Deferred taxes on undistributed earnings of foreign subsidiaries	1.5	1.7
Other	1.9	(0.5)
Effective tax rate	68.5%	57.3%

Note: Amendment to the amount of deferred tax assets and deferred tax liabilities due to a change in the income tax rate.

The Law for Partial Revision of the Income Tax Law, etc. (Law No. 10, 2014) was promulgated on March 31, 2014. It stipulates that the special corporate tax for reconstruction will not be imposed from the consolidated fiscal year starting on April 1, 2014 and thereafter. Accordingly, the effective statutory tax rate that is used in the calculation of deferred tax assets and deferred tax liabilities will be changed from 38.0% to 35.6% regarding the temporary difference expected to be resolved in the consolidated fiscal year starting January 1, 2015. The impact of the tax rate change is expected to be minimal.

### 14. IMPAIRMENT LOSS

At December 31, 2014, major impairment losses on fixed assets were as follows:

Location	Major use	Asset category	Millions of yen	Thousands of U.S. dollars
Aizuwakamatsu City, Fukushima Prefecture	Production facilities	Machinery and equipment, etc.	¥ 508	\$ 4,216
Iwaki City, Fukushima Prefecture	Idle assets	Land, etc.	457	3,791
Sichuan, China	—	Goodwill	851	7,062
Banten, Indonesia	Production facilities	Buildings and structures, etc.	1,789	14,843
Other			141	1,172
Total			¥3,747	\$31,085

### 15. CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

Reclassification adjustments and tax effects for components of other comprehensive income (loss) for the year ended December 31, 2014 were as follows:

	Millions of yen	Thousands of U.S. dollars
Valuation difference on available-for-sale securities		
Increase during the year	¥ (855)	\$ (7,095)
Reclassification adjustments	1,723	14,293
Amount before income tax effect	868	7,198
Income tax effect	(1)	(10)
Total	867	7,188
Deferred gains or losses on hedges		
Increase during the year	¥ 1,797	\$ 14,909
Reclassification adjustments	104	859
Adjustments of acquisition cost of assets	(314)	(2,601)
Amount before income tax effect	1,587	13,167
Income tax effect	(572)	(4,743)
Total	1,016	8,424
Foreign currency translation adjustments		
Increase during the year	¥12,797	\$106,155
Reclassification adjustments	—	—
Amount before income tax effect	12,797	106,155
Income tax effect	—	—
Total	12,797	106,155
Share of other comprehensive income of unconsolidated subsidiaries		
Increase during the year	¥ 196	\$ 1,628
Reclassification adjustments	(59)	(487)
Total	138	1,141
Total other comprehensive income	¥14,817	\$122,909



## 16. LEASES

### (a) Finance Leases as a Lessee

Finance lease transactions other than those involving transfer of ownership to the lessee

#### (1) Type of leased assets

- a) Tangible fixed assets: Principally equipment for manufacturing hard discs and steam-powered electric generation equipment (machinery and equipment)
- b) Intangible fixed assets: Software

#### (2) Method of depreciation

The depreciation method of leased assets is described in the sub-section “2.(h) Property, Plant and Equipment” within the section “Summary of Significant Accounting Policies.”

### (a) Operating Leases as a Lessee

At December 31, 2014 and 2013, assets leased under noncapitalized operating leases were as follows:

Future minimum lease payments for the remaining lease periods:

	Millions of yen		Thousands of U.S. dollars
	2014	2013	2014
Due within one year	¥ 452	¥ 396	\$ 3,752
Due over one year	1,820	1,730	15,095
Total	¥2,272	¥2,126	\$18,847

### (b) Operating Leases as a Lessor

At December 31, 2014 and 2013, noncancellable operating lease receivables for the remaining lease periods were as follows:

Future minimum lease receivables for the remaining lease periods:

	Millions of yen		Thousands of U.S. dollars
	2014	2013	2014
Due within one year	¥ 94	¥ 96	\$ 783
Due over one year	790	782	6,556
Total	¥885	¥878	\$7,339

## 17. CONTINGENT LIABILITIES

At December 31, 2014 and 2013, the Companies were guarantors for the borrowings below. The guarantees were principally for unconsolidated subsidiaries, affiliates and others.

	Millions of yen		Thousands of U.S. dollars
	2014	2013	2014
Guarantees	¥8,210	¥6,898	\$68,101

As the amounts include joint and several guarantors' portions as well as the Companies', the actual amounts that the Companies were contingently liable to pay were smaller than the above.

## 18. NET ASSETS

The Corporation Law of Japan (the “Law”) provides that the entire amount paid for new shares may be credited to the stated capital, with the provision that, by resolution of the Board of Directors, up to one-half of such amount paid for new shares may be credited to additional paid-in capital, which is included in capital surplus.

The Law provides that an amount equal to 10% of cash

appropriations of retained earnings shall be set aside as additional paid-in capital or a legal earnings reserve until the total of such reserve and additional paid-in capital equals 25% of the stated capital. Additional paid-in capital and the legal earnings reserve may be used to eliminate or reduce a deficit, if any, or be capitalized by resolution at the Ordinary General Meeting of Shareholders. All additional paid-in capital and the legal earnings reserve may be transferred to other capital surplus and retained earnings, respectively, which are potentially available for dividends. Additional paid-in capital and the legal earnings reserve are included in capital surplus and retained earnings, respectively.

The Law does not have a definition about the classification of paid-in capital between common stock and preferred stock. Accordingly, the Company states its capital in the total amount paid by issuing common stock and preferred stock.

The maximum amount that the Company can distribute as dividends is calculated based on the unconsolidated financial statements of the Company in accordance with Japanese laws and regulations.

## 19. REVALUATION RESERVE FOR LAND

The Company and some of its consolidated subsidiaries revalued the land they own for business in accordance with the Law concerning Revaluation of Land. The difference between the revalued amount and the book value, after the deduction of applicable tax, is stated as a land revaluation reserve. The revaluation was conducted using methods stipulated in the ordinance for enforcement of the law, specifically, the method in Item 4 of Article 2 (Reasonable Adjustment of the Appraised Value Relating to Land Price Tax), and the method in Item 5 of Article 2 (Estimation by Experts). The excess of the carrying amount of the revalued land over the market value at December 31, 2014 was ¥73,940 million (US\$613,355 thousand).

## 20. SELLING, GENERAL AND ADMINISTRATIVE EXPENSES

Selling, general and administrative expenses for the years ended December 31, 2014 and 2013 were summarized as follows:

	Millions of yen		Thousands of U.S. dollars
	2014	2013	2014
Freight	¥19,530	¥18,218	\$162,005
Employees' compensation	19,979	19,228	165,729
Other	48,308	45,655	400,729
Total	¥87,816	¥83,101	\$728,463

Research and development expenses included in selling, general and administrative expenses for the years ended December 31, 2014 and 2013 were ¥20,340 million (US\$168,728 thousand) and ¥20,396 million, respectively.

## 21. RESEARCH AND DEVELOPMENT

Research and development costs included in manufacturing costs, selling, general and administrative expenses for the years ended December 31, 2014 and 2013 were ¥20,362 million (US\$168,908 thousand) and ¥20,435 million, respectively.

## 22. SEGMENT INFORMATION

### (a) Information about sales, operating income, assets, and other items by reportable segment

Year ended December 31, 2014	Millions of yen							Adjustments	Consolidated
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Total		
Sales									
Outside customers	¥274,837	¥127,638	¥136,773	¥ 58,779	¥ 90,022	¥188,531	¥ 876,580	¥ —	¥ 876,580
Inter-segment	6,564	11,426	1,764	8,778	7,934	6,493	42,959	(42,959)	—
Total	281,400	139,064	138,537	67,557	97,956	195,024	919,539	(42,959)	876,580
Operating income (loss)	¥ (4,930)	¥ 5,460	¥ 25,770	¥ (300)	¥ 2,999	¥ (678)	¥28,321	¥ (7,406)	¥ 20,915
Assets	¥143,896	¥188,810	¥161,908	¥163,595	¥156,013	¥194,565	¥1,008,787	¥ 2,296	¥1,011,083
Depreciation and amortization	6,472	7,517	13,219	3,591	5,315	2,921	39,035	1,638	40,673
Amortization of goodwill	6	(228)	47	1,630	156	85	1,696	—	1,696
Investments in non-consolidated subsidiaries and affiliates	13,608	2,381	—	1,590	—	179	17,758	—	17,758
Increase in property, plant and equipment and intangible assets	4,195	7,768	7,825	15,432	7,106	3,768	46,094	1,224	47,318

Notes: 1. Adjustments are as follows:

- (1) Elimination of intersegment transactions of ¥37 million (US\$305 thousand) and total corporate expenses of ¥7,443 million (US\$61,744 thousand) which were not allocated to any reportable segment were included in "Adjustments" for "Operating income" of ¥(7,406) million (US\$(61,439) thousand). Total corporate expenses principally consist of total corporate common research expenses which are not attributable to any reportable segment.
- (2) Elimination of intersegment receivables and payables and assets of ¥(42,560) million (US\$(353,051) thousand) and total corporate assets of ¥44,856 million (US\$372,095 thousand) which were not allocated to any reportable segment were included in "Adjustments" for "Assets" of ¥2,296 million (US\$19,044 thousand). Total corporate assets principally consist of surplus funds of the Companies under management (in the form of cash and deposits), deferred tax assets and assets related to total corporate common research and development expenses.

2. Amortization of negative goodwill was included in "Amortization of goodwill."

Year ended December 31, 2013	Millions of yen							Adjustments	Consolidated
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Total		
Sales									
Outside customers	¥279,642	¥120,706	¥135,156	¥ 57,412	¥ 84,110	¥171,044	¥848,071	¥ —	¥848,071
Inter-segment	7,090	9,950	1,392	8,507	6,273	5,472	38,684	(38,684)	—
Total	286,732	130,656	136,548	65,919	90,383	176,516	886,755	(38,684)	848,071
Operating income (loss)	¥ 4,398	¥ 2,559	¥ 21,940	¥ (838)	¥ 5,845	¥ (626)	¥ 33,278	¥ (7,324)	¥ 25,953
Assets	¥147,207	¥185,453	¥164,167	¥153,979	¥130,941	¥183,694	¥965,441	¥20,330	¥985,771
Depreciation and amortization	6,421	7,300	14,216	3,128	4,303	2,937	38,305	1,474	39,779
Amortization of goodwill	6	(145)	86	1,550	(60)	10	1,447	—	1,447
Investments in non-consolidated subsidiaries and affiliates	13,649	1,795	—	1,484	50	162	17,140	—	17,140
Increase in property, plant and equipment and intangible assets	2,912	6,749	6,121	18,283	6,256	2,649	42,970	1,400	44,370

Notes: 1. Adjustments are as follows:

- (1) Elimination of intersegment transactions of ¥142 million and total corporate expenses of ¥7,466 million which were not allocated to any reportable segment were included in "Adjustments" for "Operating income" of ¥(7,324) million. Total corporate expenses principally consist of total corporate common research expenses which are not attributable to any reportable segment.
- (2) Elimination of intersegment receivables and payables and assets of ¥(32,287) million and total corporate assets of ¥52,617 million which were not allocated to any reportable segment were included in "Adjustments" for "Assets" of ¥20,330 million. Total corporate assets principally consist of surplus funds of the Companies under management (in the form of cash and deposits), deferred tax assets and assets related to total corporate common research and development expenses.

2. Amortization of negative goodwill was included in "Amortization of goodwill."

Year ended December 31, 2014	Thousands of U.S. dollars							
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Total	Adjustments
Sales								
Outside customers	\$2,279,856	\$1,058,801	\$1,134,571	\$ 487,592	\$ 746,761	\$1,563,921	\$7,271,503	\$ —
Inter-segment	54,447	94,782	14,633	72,816	65,816	53,864	356,357	(356,357)
Total	2,334,302	1,153,583	1,149,204	560,409	812,577	1,617,785	7,627,861	(356,357)
Operating income (loss)	\$ (40,893)	\$ 45,291	\$ 213,771	\$ (2,489)	\$ 24,876	\$ (5,623)	\$ 234,933	\$ (61,439)
Assets	\$1,193,658	\$1,566,236	\$1,343,081	\$1,357,073	\$1,294,178	\$1,613,980	\$8,368,205	\$ 19,044
Depreciation and amortization	53,684	62,355	109,652	29,791	44,092	24,234	323,808	13,591
Amortization of goodwill	47	(1,894)	392	13,523	1,290	707	14,065	—
Investments in non-consolidated subsidiaries and affiliates	112,885	19,753	—	13,190	—	1,482	147,310	—
Increase in property, plant and equipment and intangible assets	34,799	64,438	64,907	128,009	58,948	31,261	382,363	10,157

### (b) Information about geographical areas

Year ended December 31, 2014	Millions of yen			
	Japan	China	Asia (Except for China)	Others
Sales	¥549,910	¥97,525	¥187,073	¥42,073

Year ended December 31, 2013	Millions of yen			
	Japan	China	Asia (Except for China)	Others
Sales	¥526,303	¥105,658	¥175,503	¥40,607

Year ended December 31, 2014	Thousands of U.S. dollars			
	Japan	China	Asia (Except for China)	Others
Sales	\$4,561,673	\$808,999	\$1,551,826	\$349,006

Year ended December 31, 2014	Millions of yen		
	Japan	Others	Total
Property, plant and equipment	¥419,575	¥94,082	¥513,656

Year ended December 31, 2013	Millions of yen		
	Japan	Others	Total
Property, plant and equipment	¥417,640	¥76,447	¥494,087

Year ended December 31, 2014	Thousands of U.S. dollars		
	Japan	Others	Total
Property, plant and equipment	\$3,480,502	\$780,438	\$4,260,941

### (c) Information about impairment loss on property, plant and equipment by reportable segment

Year ended December 31, 2014	Millions of yen						
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Elimination
Impairment loss on assets	¥1,798	¥517	¥—	¥1,410	¥4	¥18	¥—

Year ended December 31, 2013	Millions of yen						
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Elimination
Impairment loss on assets	¥211	¥28	¥—	¥1,060	¥—	¥58	¥—

Year ended December 31, 2014	Thousands of U.S. dollars						
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Elimination
Impairment loss on assets	\$14,918	\$4,293	\$—	\$11,694	\$34	\$146	\$—

(d) Information about amortization of goodwill and unamortized balance by reportable segment

Year ended December 31, 2014	Millions of yen							
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Elimination	Total
Amortization	¥ 6	¥134	¥ 80	¥1,630	¥ 216	¥113	¥—	¥2,179
Unamortized balance	—	165	421	1,417	3,945	561	—	6,509

Year ended December 31, 2013	Millions of yen							
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Elimination	Total
Amortization	¥ 6	¥283	¥118	¥1,550	¥—	¥ 38	¥—	¥1,996
Unamortized balance	34	299	501	3,909	—	257	—	5,000

Year ended December 31, 2014	Thousands of U.S. dollars							
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Elimination	Total
Amortization	\$ 47	\$1,110	\$ 662	\$13,523	\$ 1,789	\$ 941	\$—	\$18,072
Unamortized balance	—	1,370	3,490	11,758	32,728	4,650	—	53,997

Amortization of negative goodwill arose from business combinations prior to April 1, 2010 and its unamortized balance are as follows:

Year ended December 31, 2014	Millions of yen							
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Elimination	Total
Amortization	¥—	¥ 362	¥ 33	¥—	¥ 60	¥ 28	¥—	¥ 483
Unamortized balance	—	3,012	423	—	779	316	—	4,529

Year ended December 31, 2013	Millions of yen							
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Elimination	Total
Amortization	¥—	¥ 428	¥ 33	¥—	¥ 60	¥ 28	¥—	¥ 549
Unamortized balance	—	3,374	455	—	839	344	—	5,012

Year ended December 31, 2014	Thousands of U.S. dollars							
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Elimination	Total
Amortization	\$—	\$ 3,004	\$ 270	\$—	\$ 499	\$ 235	\$—	\$ 4,007
Unamortized balance	—	24,984	3,507	—	6,459	2,620	—	37,570

## 23. PRESENTATION OF GOODWILL AND NEGATIVE GOODWILL

Goodwill and negative goodwill are netted against each other. The pre-netted amounts as of December 31, 2014 and 2013 are shown below.

	Millions of yen		Thousands of U.S. dollars
	2014	2013	2014
Goodwill	¥6,509	¥5,000	\$53,997
Negative goodwill	4,529	5,012	37,570
Net	¥1,980	¥ (12)	\$16,427



# Report of Independent Certified Public Accountants



## Independent Auditor's Report

To the Board of Directors of Showa Denko K.K.:

We have audited the accompanying consolidated financial statements of Showa Denko K.K. and its consolidated subsidiaries, which comprise the consolidated balance sheets as at December 31, 2014 and 2013, and the consolidated statements of income and comprehensive income, statements of changes in net assets and statements of cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

### **Management's Responsibility for the Consolidated Financial Statements**

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatements, whether due to fraud or error.

### **Auditor's Responsibility**

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in Japan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgement, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, while the objective of the financial statement audit is not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### **Opinion**

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Showa Denko K.K. and its consolidated subsidiaries as at December 31, 2014 and 2013, and their financial performance and cash flows for the years then ended in accordance with accounting principles generally accepted in Japan.

### **Convenience Translation**

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended December 31, 2014 are presented solely for convenience. Our audit also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 5 to the consolidated financial statements.

*KPMG AZSA LLC*

KPMG AZSA LLC  
April 3, 2015  
Tokyo, Japan

KPMG AZSA LLC, a limited liability audit corporation incorporated under the Japanese Certified Public Accountants Law and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity.

## Major Subsidiaries and Affiliates *(As of December 31, 2014)*

### Subsidiaries

Name	Ownership (%) <sup>*</sup>	Main Product(s) or Business(es)
PT. Showa Esterindo Indonesia <sup>**</sup>	67.0	Ethyl acetate
Showa Denko Gas Products Co., Ltd.	100.0	Liquefied carbon dioxide, dry ice, industrial gases, etc.
Showa Denko HD Singapore Pte. Ltd.	100.0	Hard disks
Showa Denko HD Trace Corporation	99.4	Hard disks, aluminum substrates for hard disks
Showa Denko HD Yamagata K.K.	100.0	Hard disks
Showa Denko Carbon, Inc.	100.0	Graphite electrodes
Showa Denko Sichuan Carbon Inc.	67.0	Graphite electrodes
Showa Aluminum Can Corporation	100.0	Beer and soft drink cans
Hanacans Joint Stock Company	91.8	Beer and soft drink cans
Shoko Co., Ltd. <sup>***</sup> (T8090)	44.0	General trading
Showa Denko Packaging Co., Ltd.	100.0	Packaging/containers for electronic parts, food, and medicine
Showa Denko Kenzai K.K.	100.0	Plaster materials, fireproofing pipe, wall siding, etc.

<sup>\*</sup> Proportion of ownership interest (direct or indirect) by Showa Denko K.K. and its subsidiaries in terms of the number of shares with exercisable voting rights

<sup>\*\*</sup> Production was terminated at the end of 2014. See page 17.

<sup>\*\*\*</sup> Tokyo Stock Exchange listed company

As of December 31, 2014, Showa Denko K.K. had 45 consolidated subsidiaries, including the above.

### Affiliates

Name	Equity Participation (%)	Main Product(s) or Business(es)
Japan Polyethylene Corporation	42.0	High- and low-density polyethylene
SunAllomer Ltd.	50.0	Polypropylene and advanced polypropylene-based materials
Union Showa K.K.	50.0	Molecular sieves

As of December 31, 2014, Showa Denko K.K. had 12 subsidiaries or affiliates to which the equity method was applied, including the above.

## Investor Information

### Head Office

#### Showa Denko K.K.

13-9, Shiba Daimon 1-chome, Minato-ku, Tokyo 105-8518, Japan

URL: <http://www.sdk.co.jp/english>

Phone: +81-3-5470-3235

Fax: +81-3-3431-6215

E-mail: [Sdk\\_Prir@showadenko.com](mailto:Sdk_Prir@showadenko.com)

### Regular General Meeting

The regular general meeting of shareholders was held on March 27, 2015.

### Shareholders (Top 10) (At December 31, 2014)

Shareholder	Number of Shares Held (in thousands)	Rate of Shareholding (%)
The Master Trust Bank of Japan, Ltd. (T)	61,360	4.30
Japan Trustee Services Bank, Ltd. (T)	59,491	4.17
Fukoku Mutual Life Insurance Company	55,168	3.86
The Dai-ichi Life Insurance Company, Limited	36,000	2.52
Sompo Japan Nipponkoa Insurance Inc.	30,068	2.11
Meiji Yasuda Life Insurance Company	26,447	1.85
STATE STREET BANK AND TRUST COMPANY	25,180	1.76
Showa Denko Employee Shareholding Association	24,959	1.75
JUNIPER	22,140	1.55
Nippon Life Insurance Company	20,063	1.40

Note: Each rate of shareholding was calculated after deducting the number of treasury shares (68,831 thousand) from the number of shares outstanding.

### Number of Shares Outstanding

1,497,112,926 at December 31, 2014

### Number of Shareholders

91,441 at December 31, 2014

### Classification of Stock

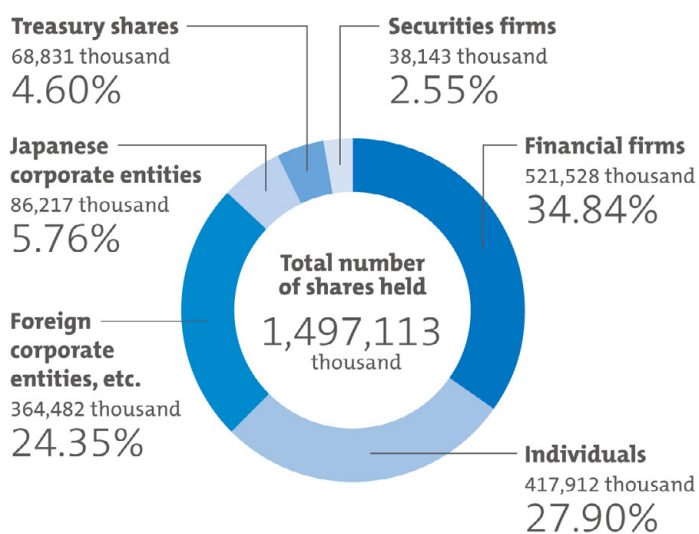
All stock issued by Showa Denko is common stock.

### Stock Transfer Agent

Mizuho Trust & Banking Co., Ltd.

2-1, Yaesu 1-chome, Chuo-ku, Tokyo 103-8670, Japan

### Shareholders by Sector (At December 31, 2014)



## Commercial Subsidiaries Abroad (As of December 31, 2014)

#### Showa Denko America, Inc.

420 Lexington Avenue, Suite #2335A, New York, NY 10170, U.S.A.

Phone: +1-212-370-0033

Fax: +1-212-370-4566

#### Showa Denko Europe GmbH

Konrad-Zuse-Platz 4, 81829 Munich, Germany

Phone: +49-89-939-9620

Fax: +49-89-939-96250

#### Showa Denko Singapore (Pte.) Ltd.

2 Shenton Way #15-03/04, , SGX Centre 1, Singapore 068804

Phone: +65-6223-1889

Fax: +65-6223-6007

#### Showa Denko (Shanghai) Co., Ltd.

18F, Wang-Wang Building No. 211, Shimen Yi Road, Shanghai, 200041, People's Republic of China

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Fax: +86-21-6217-9840



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